MAKING
RADIO

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3RD EDITION **EDITED BY STEVE AHERN**

MAKING RADIO

A PRACTICAL GUIDE TO WORKING IN RADIO IN THE DIGITAL AGE

ALLEN&UNWIN

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I dedicate this book to my father and my uncle Cec,
who were strong examples to me in my life.
They have both now passed away.

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Joanna White is a lawyer with experience in the community commercial radio sectors, having worked at 5UV Adelaide and also for the Austereo network. She was manager of 2SER-FM's Macquarie University studios in Sydney, and now lives overseas.

PREFACE

When *Making Radio* was first published, the main cover picture was of an internet 'Kerbango Radio'. Kerbango is now out of business and the radios are no longer available but since then a new mix of media has dawned, and radio keeps adapting to remain part of it. We are now in the era of Radio 2.0. In the ten years since this book was first published, technology has changed rapidly and radio industry practices have changed accordingly, so I have extensively updated this volume to provide you with the latest viewpoints on those changes in technology and in the marketplace.

Digital radio is now officially here in Australia and offers multimedia enhancements beyond traditional radio; wireless internet delivers the radio experience in a different way; podcasting offers time shifted audio through user friendly interfaces; new multimedia devices mean more competition for the ears of listeners; more stations are now on air and electronic audience measurement will track success or failure with far more accuracy than ever before. These are just some of the contemporary challenges facing radio broadcasters, who now need to think of themselves as audio content creators in a multiplatform world.

This is a 'how-to' book for people in, or about to join, the radio industry. It is not a theoretical look at the role of the media in the world today. This book will help you build a successful career by making good-quality, professional radio content in the face of the many changes taking place in today's radio industry.

The radio people who speak to you through these pages are all people who have made quality radio on a daily basis. Yes, there is analysis. Yes, hopefully there are ideas that will provoke you to further thought about what you do and why it is important. But primarily this book sets out to provide a practical approach to making good radio in the modern multimedia landscape.

As this book goes to print, Australia is one year into digital radio using the world-leading DAB+ transmission system. The world is looking to Australia for innovation in digital radio because all indications are that this country has achieved the right mix of technology, marketing, programming and commercial focus to make the new transmission system profitable and successful. Australia has a well-regulated multi-sectored radio broadcast landscape which encourages competition for both profit and public benefit, which has also been a factor in the success of digital radio to date. A whole new chapter has been devoted to exploring Australia's digital radio case study in this edition.

Events such as the 2000 'cash-for-comment' enquiry, tight regional content regulation and new licences have ushered in more changes and tougher compliance. The radio industry also faces challenges from media convergence, increasing the level of competition from other portable audio media such as mobile phones, iPods, MP3 players, podcasts and internet radio. These issues and others covered in the various chapters of this book will affect you as a current or future radio broadcaster. Think about them, and develop strategies that will help you to work best within the new structures and work practices that are bound to accompany these changes.

It has been my pleasure to work on this book with the many professional colleagues who have contributed to various chapters. This is the third edition of this book; the first edition of *Making Radio* was published in 2000 and was reprinted again three years later due to popular demand. Prior to the first edition, an earlier book put together by Lois Baird and her colleagues at AFTRS, called *Guide to Radio Production*, was an important text for radio employees, and some of the information from it is still contained in *Making Radio*.

Thank you to the AFTRS and CSU specialists who worked with me on this book and to Elizabeth Weiss and Lauren Finger at Allen & Unwin. My thanks to Liam Ahern and Deb McMahon for transcriptions, and my wife, Serena, and our two boys, who were very much a part of the many hours spent on this book.

Statistics used in this book were the most up to date available at the time of publication.

The radio industry is all about performance, professionalism and, very often, a good deal of stress. Here are some previously published thoughts about this demanding industry.

THE PEOPLE WHO MAKE RADIO

Radio people are pretty cool and relaxed—right? Wrong! It's all a front. Making radio is one of the most stressful jobs you can get.

Radio announcers have to drive the radio console buttons, think about their program content and engage their minds and mouths together to deliver sensible content for their listeners. They have to sound 'up' and friendly, even after a heavy night. Then they have to bring in little snippets of their lives each day to share with the listeners who want to get to know them, and they have to be up with the latest music trends and the day's current affairs.

Radio journalists have to produce a new bulletin every hour. They rush about the newsroom following up leads and talking to people, then they bash out a story and pass it to an editor, who might tear it to shreds. Once all the other journalists have done the same and there is enough material for the next bulletin, at about five minutes to the hour they collect all the bits of paper and computer files and pass them to one of the team, who has the added burden of making sense of it all for the listeners. That person rushes into the news booth for a moment of peace before they push the button, play the news theme and start to read the bulletin. On air they sound knowledgeable and in control—but you should have seen them a few minutes before!

Radio programmers have to be on top of things every day, directing their on-air talent and making sure the content is right for the audience. When they are not at work they usually have at least two radios on at any one time so that they can hear their own station and monitor their opposition. When the radio station is on air they are effectively working—and radio stations are on air 24 hours a day, every day of the year. Then, eight times a year in capital cities, their jobs are on the line as the rating results slip into their inbox to reveal whether their station has gone up or down in popularity.

If you are ever asked to complete a radio survey you will hold the careers of radio programmers, announcers, producers and others in your hands. If you (and the other few thousand people who also have the survey) don't tick their box, they could be out of a job in weeks.

Radio is all about making programs and playing music that appeals to target segments of the population. Radio stations must have an audience to stay in business. In commercial radio the audience share attracts advertisers who pay for the operational costs of the station and who generate a profit for the shareholders. But ABC, SBS and community radio are also businesses—for the ABC the shareholders are the Australian taxpayers, and for SBS they are both taxpayers and sponsors. Community radio is a community business with shareholders demanding that the operation return social benefits to the community and pay its way on a non-profit basis.

Audiences are of prime importance, but there are other factors that affect the operation of a station—someone might buy the station and want a staff shake-up, or the station may change the target audience and want a new program format.

Radio is a volatile industry with stress built into every aspect of whatever job you do. So why do people do it? The answer is because, for real radio people, it gets in your blood. You do it because you love it. Like acting, or any other performance industry, you are judged by your audience and the rush you feel when you generate a standing ovation is worth the stress and difficulty along the way. In radio, the standing ovation is the ratings result and the instantaneous listener interaction you can generate from such an immediate medium. When it comes together it's all worth it.

Steve Ahern

1. A HISTORY OF RADIO IN AUSTRALIA

Phil Charley, Wayne Mac and Steve Ahern

Radio was born from the convergence of many inventions and technologies more than a hundred years ago. To make sense of the current media changes it pays to study the lessons of history. The same trends reoccur with the convergence of old and new media and technology in the digital domain as they did in the past. Those who understand them will make good decisions about the future.

Radio was not invented by any one particular person. It developed through advances in science and technology over a period of several hundred years, across several countries, and many brilliant minds were involved. In 1267 the English philosopher and scientist Roger Bacon wrote of the possibility of using electricity for communications (he was promptly imprisoned for dealing in black magic). In 1672 Germany's Otto von Guericke made a sulphur ball that, when rotated and rubbed, produced electricity, rather like a modern generator. The Leyden jar, forerunner of the modern battery, was produced by Dutch inventor Musschenbroek in 1746. A vital link in the chain of discovery was the identification of positive and negative electrical charges by American Benjamin Franklin in 1752. And, eventually radio waves were understood to be physically similar to light waves, both being electromagnetic radiations.

In chronological order, here are some of the other important discoveries and developments that led to radio's multinational birth:

1800 Volta (Italian) developed the first battery.
1819 Oersted (Danish) demonstrated that electricity can magnetise.
1825 Ampère (French) laid down the basis for electrodynamics.
1827 Ohm (German) studied the relationship between current, voltage and resistance.
1831 Faraday (English) discovered electromagnetic induction, magnetic lines of force.
1831 Henry (American) developed the electromagnet.
1887 Hertz (German) transmitted and received the first radio waves.

There were also many other great minds that contributed to the overall development of radio, including Edison, Bell, Maxwell, Fleming, Morse, Lodge, Meissner, Pupin and de Forest. However, it was Marconi who deserves the main credit for putting the accumulation of knowledge into the practical use of wireless telegraphy, or radio, as we know it. Marconi recognised that converging existing technologies could create a new medium. But radio owes its success as much to his marketing business skills as it does to his technological prowess.

Guglielmo Marconi came from a wealthy Italian family, and had the time and the money to buy apparatus and to experiment. He built his own sending and receiving equipment, and in 1894 transmitted morse code messages by radio waves, for the first time in history, across the garden of his father's home in Italy. In 1897 he developed the first commercially successful spark-coil transmitter. In 1901 Marconi sent a signal (simply the letter 'S' in morse code) across the Atlantic Ocean, a distance of 1800 miles (about 2900 kilometres), a triumph of public relations as well as technology.

Australia was involved in experimentation at that time, too. In 1897 William Bragg of Adelaide and George William Selby of Melbourne demonstrated wireless transmission of messages. In 1901 Henry Jenvey, an electrical engineer with the Victorian Post Office, made radio contact with the Duke of York's escort ship during a royal visit to Australia. Other Australian wireless pioneers included PB Walker, CP Bartholomew and Frank Leverrier of Sydney.

The Marconi family is still involved in electronics and Marconi's grandson is keeping the link with radio alive. When he visited AFTRS in 2004 he said:

> My grandfather was the one who put all the pieces together, that is why he is remembered. His legacy united the world then and led to the birth of other electronic media. His family hope that radio will always be used to bring unity and peace to the world.

Recognition of the importance of radio came about in Australia with the introduction of the *Wireless and Telegraphy Act 1905*. This brought about federal control of the medium of communication by wireless, mainly for navigational purposes.

Internationally, the first report of a radio program was in 1906 when Professor Reginald Fessenden of Massachusetts, United States, used his experimental station to broadcast a short program of two musical items, a talk and a poem. The program was picked up by wireless operators on ships as far as 300 miles (about 480 kilometres) away.

Perhaps the most notable pioneer of radio in Australia was Ernest Fisk. He arrived in Australia from England in 1910 with patents from Marconi and Telefunken. He eventually became managing director of Amalgamated Wireless (Australasia) Limited (AWA), which played a big part in the development of radio in Australia. In 1913, AWA established the Marconi School of Wireless, training many of the early pioneers in the technical aspects of radio and continuing to train technicians and engineers over the years. Because of security restrictions there was a suspension of experimental radio in Australia during the First World War. Meanwhile, in the United States, by 1916 the idea of a 'radio music box' for home reception of musical programs had been put forward by David Sarnoff, an engineer with the Marconi Wireless Telegraph Company of America.

AWA conducted many experiments in radio telephony. In August 1919, AWA transmitted a radio program of music from their offices in Clarence Street, Sydney, to a hall in Elizabeth Street, a few city blocks away. Quite a number of former First World War wireless operators helped to increase the growing interest in radio in the early 1920s, establishing amateur (or 'ham') wireless stations.

The world's first radio station to broadcast regular programs was the Marconi (there's that name again) transmitter in Essex, England. It started in February 1920 with a recital by the renowned Australian singer Dame Nellie Melba. The first radio station on air in the United States, KDKA Pittsburgh, followed nine months later, in November 1920, premiering with a presidential election broadcast.

By 1922 the broadcasting of music was an accepted fact of life. In the United States more than 500 radio stations had been licensed to operate and in Britain the British Broadcasting Company (BBC) was under way. The name was changed to British Broadcasting Corporation in 1927.

Back in Australia, on 31 March 1922 the country's first 'live' broadcast took place, transmitted from the stage of Her Majesty's Theatre in Sydney. The program featured a Russian pianist, and vocal duets by British couple Madge Elliot and Cyril Ritchard.

In 1922, AWA entered into an agreement with the Commonwealth of Australia to develop, manufacture and sell radio communication equipment, to erect radio stations and conduct radio services. In 1923 the Australian Commonwealth Government approved the 'sealed set' system that had been proposed by AWA. Listeners paid a subscription to a private broadcasting company and a licence fee to the government, then tuned into the station or stations to which they subscribed. The sets were fixed to only those frequencies, so that nothing else could be heard. Limiting the way consumers could use new technology did not prove successful and the sealed set regulatory system was soon abandoned, showing that consumers will get what they want from new technology irrespective of what lawyers and regulators may say. This same trend is evident with new technology and the internet today.

The annual government licence fee was 10 shillings for one station and £1 for two or more stations. On top of the government fee the annual station subscription ranged from 10 shillings to three guineas (£3.3). In 1925 the minimum weekly wage for men was about £4.10, so it was not cheap to buy radio services.

There were two stations approved for Sydney: 2SB, operated by Broadcasters Sydney Limited, with a subscription of 10 shillings, and 2FC, operated by Farmer and Company, with a listener's subscription of three guineas. In Melbourne there was 3AR, the Associated Radio Company; and in Perth 6WF, Westralian Farmers Limited.

The great occasion for Australia was 13 November 1923 at 8 pm, when our first radio station went to air. This was 2SB Sydney, which later changed its call sign to 2BL. Twelve days later 2FC went to air, although it was not officially opened until January 1924. Radio 2SB's opening program was broadcast from a studio in Phillip Street. It was a live musical performance featuring a soprano, a baritone, a contralto, a cellist and the St Andrews Quartet. The 2FC opening program was a complete transmission of the JC Williamson and J & N Tait production of the musical *The Southern Maid* from Her Majesty's Theatre. The next radio station to open was 3AR Melbourne, on 26 January 1924. As well as its pioneering work in Australia, AWA also led the way in international broadcasting by being the first to broadcast a radio program from Australia to Britain.

The origin of call signs in Australia is interesting. The prefix numerals—2 for New South Wales, 3 for Victoria, 4 for Queensland, and so on—dates back to Federation in 1901 when defence became a federal responsibility. At that time Australia was divided into numbered districts. New South Wales was the second military district, Victoria the third, and so on. This method of identifying the states was carried on by the radio authorities and is now also used in Australia's postcode system. There was no first, or number 1, district, probably because it could be confused with the letters 'I' or 'L'.

Now to the origins of the letters used in just a few of Australia's radio station call signs:

2HD Newcastle comes from Harry Douglas, who started the station in 1925.
2UE Sydney was originally 2EU, standing for Electrical Utilities. It was thought that 2EU sounded too much like 'who are you?' so the letters were reversed.
4GR Toowoomba stood for 'Gold Radio' because the first licensee was Ted Gold.
4QG Brisbane stood for Queensland Government.
7HO Hobart was started by Ron Hope, so the letters stand for the first two letters of his name and for the word 'Hobart'.
2GB Sydney came from the name of an Italian philosopher, Giordano Bruno, respected by the Theosophical Society, 2GB's first licensee.
2SM Sydney came from St Mark's Church, Drummoyne, because the local parish priest, Father Meaney, held the first licence.

Many call signs are derived from the name of the town or area concerned, such as 2DU Dubbo, 2BH Broken Hill, 4BU Bundaberg and 3CV Central Victoria. Over the years some original call signs have changed or been dropped by successive station owners who wanted to market a brand name rather than a call sign.

In July 1924 the government brought in new regulations that established two categories for radio stations in Australia: the A Class stations, financed by licence fees from listeners, and the B Class stations, financed by the selling of advertising time—in other words, the commercial stations.

The government initially allowed some ambiguity by permitting the A Class stations to accept restricted advertising—a total of one hour in every 12 hours of broadcasting time, in periods of no longer than five minutes at a time. However, the A Class stations were not very interested in selling advertisements and this arrangement was dropped three years later, in 1927.

The first B Class station to take to the air was 2BE Sydney, operated by the Burgin Electric Company. It started on 7 November 1924 and ceased operations in November 1929.

The oldest still-functioning commercial station in Australia is 2UE Sydney, which started on 26 January 1925. One day later 2HD

Newcastle opened. Next in order were 2UW Sydney, 5DN Adelaide, 3UZ Melbourne, 4GR Toowoomba, 2KY Sydney. 2GB Sydney opened in 1926. Revenue for each of the radio stations averaged £70 per week in their first year of operation.

In 1928 the federal government decided to set up a national broadcasting service, with A Class stations owned and operated by the government but with programs provided by independent contractors. Between July 1929 and December 1930 the government took over the A Class stations. After this, the Australian Broadcasting Company was hired to provide programs in all states and territories. This company was made up of Greater Union Theatres, Fuller's Theatres and music publishers J Albert and Sons.

Although program contractors were paid half the licence fee, the first year of operation apparently resulted in a loss for them. The government ended the arrangement and in mid-1932 set up the Australian Broadcasting Commission. It was at this stage that the terms 'A Class' and 'B Class' were phased out in favour of 'national' and 'commercial' stations.

By 1930 most countries had well-developed broadcasting systems in operation. The number of stations in the world in 1925 was about 600. That number more than doubled by 1935. At a time when Australia was uniting politically after Federation in 1901, radio played an important role in uniting the new nation through shared news, ideas and experiences beamed across this extremely large continent.

The early 1930s was a time of a great expansion in broadcasting in Australia. In 1930, 13 new commercial stations came into being, and one new national station. In 1931 there were another 17 stations launched, 15 commercial and two national. In 1931 the Federation of Australian Radio Broadcasters (FARB), originally known as the Federation of Australian Commercial Broadcasters, was formed with 27 members to safeguard the interests of the commercial group of stations. By the end of the 1930s there were 131 radio stations, including 26 national stations.

Radio programs became much more diverse in the 1950s. Serials, recorded on 16-inch acetate (and later vinyl) transcription discs, became popular family listening. Plays were very much in vogue, usually one hour in length. Talent quests, quiz shows, comedy, sport and a variety of musical programs were also popular with listeners.

A number of production houses supplying serials and other recorded features to the Australian radio industry were established by the late 1930s. In the heyday of Australian radio drama some of these production companies were Grace Gibson Radio Productions, AWA Limited, Hector Crawford Productions, BEA, EMI, Fidelity Radio, Ron Beck, Donovan Joyce Productions, Artransa, Featuradio, British-Australian Programmes, as well as 2UE, 3DB and the Adelaide Advertiser Network.

In December 1939, the year the Second World War started, Prime Minister Robert Menzies inaugurated Australia's overseas short-wave service, which became known as Radio Australia.

Two of Australia's largest advertising agencies wielded tremendous influence on the programming of commercial stations during the Second World War and the post-war period, until the advent of TV in 1956. The agencies were George Patterson Pty Ltd and the J Walter Thompson Company. Both bought large amounts of radio time to broadcast top radio shows for their clients Lever Brothers and Colgate Palmolive (the big soap companies—hence the term 'soap operas' or 'soapies'). Apart from a rash of serials, some of the shows broadcast under this type of arrangement were: *Lux Radio Theatre*, *Australia's Amateur Hour*, *The Quiz Kids*, *Calling the Stars*, *Share the Wealth*, *Pick-A-Box*, *Cop the Lot*, *The Youth Show* and *Rise and Shine*. The two top performers associated with many of these shows were Jack Davey, a New Zealander, and Bob Dyer, an American—the two quizmaster kings of Australian radio. If you think 'product placement' is a modern phenomenon, listen to some of these programs.

Part of the history of radio in Australia was the establishment of the Royal Flying Doctor Service and the School of the Air in outback areas during the late 1920s and early 1930s. These vital services still play a critical role in the sparsely settled regions of inland Australia, but increasingly the School of the Air is becoming School of the Internet, reflecting another major shift in content delivery technology.

Networks of radio stations were formed during the 1930s for the purpose of facilitating programming and the selling of programs and air time for advertising. These networks included the AWA Network, the Federal Network, Associated Broadcasters, the Commonwealth Broadcasting Network and the Major Network. The Macquarie Network, the biggest and most influential, was formed in 1938 with key station 2GB Sydney. At one time the Macquarie Network had 26 member stations and a further 35 cooperating stations.

Network discounts enabled advertisers to buy radio time at favourable rates, simplifying accounting and billing procedures. Networking, both commercial and ABC, was an important development. It brought the major radio shows into the homes of people in most parts of Australia.

Comedy shows enjoyed great popularity during the late 1930s, the 1940s and the early 1950s. These included *Dad and Dave*, *Mrs 'obbs*, *Fred and Maggie*, *Yes, What?* and *Life with Dexter*. Popular serials that attracted loyal followings were *Blue Hills*, *When a Girl Marries*, *Dr Paul*, *The Lawsons*, *Mary Livingstone MD*, *Big Sister*, *Portia Faces Life*, *Martin's Corner*, *Hagen's Circus*, and such dramatic thrillers as the Gregory Keane series *Dossier on Dumetrius*, *Deadly Nightshade* and *Twenty-six Hours* along with *First Light Fraser*, *The Woman in Black*, *Night Beat*, *I Hate Crime* and *Tarzan*.

Many talented actors were involved, including Nigel Lovell, Alistair Duncan, Lyndall Barbour, Leonard Teale, Charles (Bud) Tingwell, Thelma Scott, Owen Weingott, Guy Doleman, George Edwards, Nell Stirling, Edward Howell and Therese Desmond, to mention just a few.

Apart from the quiz kings Jack Davey and Bob Dyer, the 1940s and 1950s produced a glittering array of radio stars including Roy Rene (Mo), George Wallace, John Dease, Eric Pearce, Terry Dear, Gwen Plumb, Willie Fennell, Howard Craven, Eric Baume, Keith Smith, Charles Moses and Len London—and there were many others, all household names.

Producers of radio drama and musicals were also well known to listeners. Names such as Harry Dearth, E Mason Wood, Donovan Joyce, Ron R Beck, Humphrey Bishop, Hector and Dorothy Crawford, Grace Gibson, J Colin Craigen and Harry Harper became strongly identified with the programs they produced.

Before TV, radio devoted many hours each week to children's programming. *The Fairy Godmother* ran on 2CH Sydney and the ABC had its enormously popular *Argonauts' Club*, which included serials like *The Muddle Headed Wombat*. Then there was *The Search for the Golden Boomerang*, *David and Dawn in Fairyland* and more grown-up fare such as *Hop Harrigan*, *Superman* and *The Air Adventures of Biggles*. Most radio stations had their 'aunties' and 'uncles', personalities who conducted afternoon children's sessions, running various competitions, reading letters and essays, giving birthday calls and sometimes awarding certificates for effort and excellence.

When TV was launched in Australia in 1956 the public was seized by the novelty of the 'glamour' medium and radio was pressured to reinvent its place in the lives of its audience. This led to marked changes in radio as the industry turned to technology and programming innovations to combat the more compelling visual medium.

The smaller battery-powered, portable transistor radio replaced the more cumbersome valve-operated models and this brought about a change in listening habits. Radio spread outdoors so that people could listen individually, wherever they went. The radio became a personal accessory. It also spread to every room in the home, not just the lounge room, where it had been ensconced for years but was now being moved aside to make way for the TV set. More and more car radios were also produced. Because radio could be heard on these new portable devices, the listener experience changed and stations which responded to that had renewed success. Digital devices like mobile phones are the transistor radios of the twenty-first century and radio must be able to be heard in them, a lesson the radio industry is well aware of in its move to digital radio.

It became apparent that radio's great strengths compared with TV were its flexibility, immediacy and intimacy and its ability to expand the imagination and to connect with the listener in any location. Radio also proved it had great strengths as a service medium, able to become intimately involved with the community in a way that was not possible for TV. Later it showed its ability to reach specific age groups and demographics through specialised program formats.

When compared with the much higher costs of TV production and advertising, commercial radio demonstrated its power to sell products through a low-cost advertising medium. From a commercial perspective, radio's ability to stage promotional events and competitions for its advertisers and to conduct outside broadcasts easily and without fuss added points in its favour.

So radio programming and operations evolved to meet the new challenge of TV and the more sophisticated demands of the audience. Radio became more and more a personal medium for music, news, information, entertainment, service and perhaps, most importantly, for listener involvement and interactivity. In the new scheme of things, commercial radio stations dropped drama, quiz shows, features and serials as these formats adapted to the TV age, and embraced program elements such as immediacy in news and telephone talkback. Radio became the first 'interactive' medium.

News bulletins became shorter, more frequent and crisper in style, using actuality and voice grabs. News on the hour and, later, the half-hour, became normal programming practice.

Initially, TV had very little effect on commercial radio station revenue in Australia. There was a slight drop in revenue during the first year of TV, 1956–57, when the overall radio industry net profit dropped from £1.5 million to £1.49 million, but there was a quick recovery and the following year profits rose again to £1.9 million. The overall trend however was down, in the face of competition from the new advertising medium TV, which fragmented media consumption. Radio now has about an 8 to 9 per cent share of Australian advertising nationally.

With the advent of TV, produced mostly from the capital cities, radio's involvement with the community became most important in country areas. As well as the usual services such as news, weather, sport and 'what's-ons', country stations provided market reports, frost and flood warnings, bushfire information, livestock details and agricultural advice. There were also broadcasts from local shows and field days, emergency service information and funeral announcements. Even in today's sophisticated media environment, rural radio stations still play a vital role in times of natural disasters such as floods and bushfires, and serve to link local communities.

An innovation by 2UE Sydney in 1958 was the introduction of Top 40 music programming copied from successful stations in the United States, featuring the playing of the 40 most popular songs of the day. This changed the style of popular musical programming and was quickly adopted by many stations around Australia, becoming another example of how radio adapted itself to threats from rival media by identifying new market segments and building new formats to attract them.

Before Top 40 programming many of the big-name radio hosts tended to be those heard nationally through the syndicated programs mentioned previously. There were, however, quite a few high-profile personalities who were only known in certain cities. For example, listeners outside of Melbourne would not have been familiar with the authoritarian tones of Norman Banks or the zany antics of Nicky and Graham or Ackie and Jackie.

The emergence of Top 40 radio gave rise to many young local performers who were very different from their predecessors. Fuelled by the sound of rock 'n' roll, the birth of teenage pop culture and the increasing mobility of the medium, radio was ideally positioned to take new directions with the Top 40 sound.

Central to the Top 40 format was the style and individuality of the presenters. By the late 1950s the era of the disc jockey or DJ had begun. Among the pioneers of this 'hip and happening' approach were Bob Rogers, John Laws and Tony Withers in New South Wales; Stan Rofe, Don Rainsford and Brian Taylor in Victoria; Geoff Atkinson, Bill Gates and Malcolm Searle in Queensland; Graeme Cornish, Jim Slade and Bob Francis in South Australia; Peter Dean, Johnny Fryer and Colin Nichol in Western Australia; and John Loughlin, Rod Muir and Don Lunn in Tasmania.

While these and others bolstered their popularity through the early part of the 1960s, the Top 40 formula was further developed and sometimes rebranded. In Adelaide, for example, there were three commercial AM stations competing head to head—5AD was the original Top 40 player, while 5KA employed the Top 50 sound and 5DN the Big 60.

Many stations in the 1960s positioned themselves with younger listeners by promoting their on-air people in teams as if they were a pop group. Examples include the 'Good Guys', first heard on 2SM in 1963 and then on 2HD, 3AK, 5KA, 6PR and 7HO. 2UW had the '11–10 Men', 4BC the '11–20 Men', and 6KY the '12–10 Men'. 3KZ had the 'Most Happy Fellas'. It was all very 'blokey'. Women were not part of the DJ scene. Instead, the few women who were on the air in those times were mostly heard during the women's morning session or on midnight-to-dawn shifts. Some women had been on air during the war years but, like in most industries, were forced to give up their jobs when men returned from active service.

Prominent in most commercial stations of the 1960s was the increased use of slogans or, as they became known by the 1980s, 'position statements'. There was the 'Brighter 2UE', 'Happening Radio 3XY', '3AW: The Talk of the Town', 'Action Radio 5AD', 'Fun Radio 3UZ', the 'Big BC', '2SM: Two Way Radio' and '7HO: The Big Sound' to name a few.

Stations also used lavishly produced identification jingles and DJ themes to augment their sound. These were usually bought 'off the shelf' in the United States with call signs, cities and slogans added. When these catchy jingles were combined with the constant patter of the DJs and the hit records of the day, radio stations became a magnet for young listeners chasing a lively sound.

In the mid- to late 1960s one 'positioner' was introduced that had a profound effect on the presentation of nearly every music station then and now. Two short, sharp words said it all: 'More Music'. Like the Top 40 format that was transplanted from the United States in the late 1950s, the More Music approach that followed was arguably the most potent force in radio formats of the 1970s and into the 1980s.

Originally installed on 4IP as early as 1966 by their US-based consultant, More Music was characterised by super-tight presentation, contests, short talk breaks, a repetitive rotational playlist and a variety of audio tricks. More than one radio station was heard running reverberation (reverb) across their program chain and speeding up songs.

It was 2SM that brought More Music to prominence in Sydney during 1969 and later, through its core of programming people, spread the format's ethos to other markets during the 1970s. In addition to 4IP and 2SM the format's 'feel' was heard on 3XY, 2NX, 6PM and 7EX. Also the similarly named 'Constant Music' format was played on 4BK and 5KA in the early 1970s. Canberra's 2CC followed the fashion, launching in 1975 as 'Music Radio'.

Rod Muir was the main driving force of 'More Music' on AM in the 1970s and was also one of the major players behind the 'Triple Your Music' concept on FM in the 1980s.

Talkback, or open-line as it was known in the 1960s, officially began in April 1967. Until that time some stations were using homemade devices to record telephone messages to be aired later in certain programs. This was in contravention of broadcasting regulations of the time but it did not stop Melbourne's 3AK and Sydney's 2UW, which were instructed to cease the practice until the regulations were finally changed. Live talkback enabled listeners to participate in programs for the first time. It gave them a chance to have their say on topical issues and to seek information from experts, cementing its place as the first live interactive medium.

It has been said that talkback radio replaced the neighbourly chat over the backyard fence. It certainly revolutionised the sound of radio and began the polarisation of formats, splitting them into the extremes of either music or talk. Radio now concentrates on music and talk programs instead of serials, quiz shows, drama and variety programs. Pioneers of talkback radio were Ormsby Wilkins, Mike Walsh, John Pearce, John Laws and former radio quiz champion and later politician Barry Jones. Talk formats now appeal to information seeking audience segments, while music radio entertains listeners who often want to escape 'information overload'.

From 1950 to 1991, 30 new AM commercial stations opened in Australia, many in small country centres and geographically isolated regions, but some to better serve large cities and high population areas. These included 2NX Newcastle in 1954—Newcastle's third commercial station, 4GG Gold Coast in 1967, 2CC Canberra in 1975—giving Canberra a second AM commercial station, 3MP Melbourne in 1976, and in 1978, 2OO Wollongong and 2WS Sydney.

The face of radio changed considerably when FM stereo broadcasting was finally introduced in the late 1970s after years of indecision and testing. A combination of better sound quality, good marketing, larger numbers of available receiver sets, and new, more highly targeted formats was responsible for the success of FM.

The establishment of the public broadcasting sector, now called 'community broadcasting', in 1974 was regarded as an important factor in offering listeners something different as an incentive to switch to the FM band. Initially proposed by the Whitlam Labor government, public broadcasting legislation was eventually enacted by the Fraser government's Communications Minister Tony Staley. The sector responds to community needs and allows for the servicing of minority and special interests, airing a wide and diverse range of programs and giving access to the airwaves for volunteer broadcasters. Initially public broadcasting station licences fell into Educational, Community and Special categories, but these format based licence criteria are now obsolete and the regulatory authority has one common set of rules for all community stations.

In 1974 the first three public broadcasting stations in Australia were opened. They were two 'special' category stations, 2MBS-FM Sydney and 3MBS-FM Melbourne, and one 'educational' station, 5UV Adelaide (now called Radio Adelaide). 3CR-FM Melbourne became Australia's first 'community' category station in mid-1976. Between 1976 and 1977, 16 public broadcasting station licences were issued, at least one station in each state and one in the Australian Capital Territory. All stations were non-profit and were staffed by volunteers. Now there are over 350 community stations around Australia.

Community broadcasting was followed by the start of a new ABC service for classical music listeners called ABC-FM in 1976, and later by new FM commercial stations. The opening up of new frequencies dramatically enlarged the radio landscape in Australia during the following decade and created more competition for established players.

Since then other licence categories, such as 'narrowcast', have also been added, giving Australia one of the most diverse radio regulatory landscapes in the world, with the commercial and non-commercial sectors keeping each other on their toes. Unlike in the UK and America, all sectors have been allowed to grow and compete vigorously, a reason why there were never any 'pirate' stations in Australia as there were in the UK, where government broadcasters monopolised the airwaves to the exclusion of commercial stations until the 1970s.

The Special Broadcasting Service (SBS) was established in 1978 to provide multilingual radio services through stations 2EA Sydney and 3EA Melbourne. Having expanded its services, SBS radio is now broadcasting all around Australia in more than 60 languages and is keen to use the extra channel opportunities presented by digital radio to further expand its programming.

Commercial FM stations were introduced to Australia in 1980. Seven stations were opened that year—two in Sydney, two in Melbourne and one each in Brisbane, Adelaide and Perth. The new stations were branded with words such as Fox and Eon, or 2Day and Triple M, which set them apart from the traditional AM call signs, even though behind the brands there were still official call signs.

After an initial round of new commercial FM licences were bought, many AM stations were offered the chance to convert to the FM band.

Some took up that opportunity while others did not see the value of changing from the most listened-to band to take a chance on a new band that might not yield good audience numbers. Nearly 40 years later, now that FM is the dominant band, some companies look back at that strategic decision with regret. The lessons of FM conversion from the 1970s may well prove relevant again as stations face similar strategic decisions about eventually switching off their analog signals and moving fully into digital radio broadcasting.

A technological development designed to combat the effect of the commercial FM stations was the introduction of stereo AM broadcasting in 1985. AM Stereo, however, did not prove popular with listeners because reception required a new, expensive, hard-to-get radio receiver, and AM Stereo virtually disappeared. The lessons learnt about properly marketing, pricing, supplying and promoting new receiver technologies from the failed introduction of AM Stereo are relevant today for the introduction of digital radio and multimedia services.

In 1983 federal parliament enacted the *Australian Broadcasting Corporation Act* and the Australian Broadcasting Commission became a corporation, with a new chairman, new directors and a new charter. This allowed the ABC to enter into commercial enterprises such as shops and also coincided with the expansion of its youth network Triple J.

The *Broadcasting Services Act* came into effect in October 1992, doing away with the 1942 *Broadcasting Act*, offering the radio sector greater self-regulation and altering some of the rules on foreign and cross-media ownership. At the same time the old regulatory body, the Australian Broadcasting Tribunal, was replaced with the Australian Broadcasting Authority (ABA).

With the growth of new forms of media such as the internet and the convergence of telecommunications technologies, Australia again changed its media regulatory environment in 2005, merging the ABA with the telecommunications regulator the Australian Communications Authority (ACA) to form ACMA, the Australian Communications and Media Authority.

As the regulatory rules changed, so did many ownership structures. In the late 1980s the Macquarie Network, then owned by the Fairfax newspaper group, was sold to Sonance and eventually broken into individual parts and sold on to various other broadcasting organisations. Fairfax has now bought back into radio and owns 3AW, 2UE, 4BC, 6PR talk stations and a few music stations.

In 1986, the Lamb family sold 2UE to television proprietor Kerry Packer, who also bought 3AK with the aim of building a syndicated talk radio network led by Brian White. The Consolidated Broadcasting

Network (CBC) failed because the combination of syndicated talk presenters did not adequately reflect either Melbourne or Sydney to each city. Only the breakfast programs were local, while all other programs were broadcast in both cities. When Melbourne listeners heard about traffic jams on the Sydney Harbour Bridge and Sydney listeners heard the Melbourne announcers talking about their favourite Aussie Rules football teams, they became alienated by the networked format. Falling ratings eventually saw Packer sell those stations to Alan Bond as part of one of the biggest media deals of the 1980s, and capital city talk stations learnt the lesson to stay local in major daytime shifts.

Austereo Limited was started by Paul Thompson with SA-FM in Adelaide, using audience research and programming techniques that were new to Australia at the time, making the station more listener responsive than its rivals. Austereo then acquired FOX-FM Melbourne, 2DAY-FM Sydney and other stations, forming a national capital city network. Throughout the 1980s and 90s the two giant FM groups, Austereo and Triple M, battled for market leadership, but eventually merged to save money and reduce debt.

The Australian Radio Network's (ARN) growth in the 1990s parallels that of the Macquarie Network of the 1940s and 50s. After its growth phase, ARN also downsized and stations now owned by ARN include WS-FM and 96.1-FM in Sydney, 4KQ and 97.3 in Brisbane, GOLD-FM in Melbourne, and the MIX group of capital city stations. In 2003 many old ARN station names were rebranded as MIX under American CEO Bob Longwell to introduce economies of scale and consistent marketing.

Unlike other broadcast sectors in Australia, radio has no foreign ownership restrictions and, at the time of writing ARN is part owned by American broadcast giant Clear Channel and Irish media baron Tony O'Reilly. DMG Radio is owned by the British Daily Mail group. Austereo, Fairfax Media and Southern Cross Media Group are publicly listed Australian companies.

The advent of satellites, starting with the launch of AUSSAT in the mid-1980s allowed easier program networking, making satellite program distribution an integral part of the broadcasting scene. Satellites are now being superseded by online delivery of ads and programs. Some of the most successful networked programs during the 1990s were ARN's overnight *Truck Radio*, Austereo's *Martin and Molloy Drive* program and 2UE's *John Laws Show*.

The 1990s saw the growth of large regional companies such as DMG Regional Radio and Reg Grundy's RG Capital Radio, which relied on networking from regional 'hub stations' using satellites and wide area computer links. Both groups were bought by Macquarie Bank in 2004 under the banner of Macquarie Regional Radioworks, with CEO Rhys Holleran driving the company's growth. After another regulatory change in 2008, the company expanded into regional television and merged various functions such as sales and news. This generated debate about networked content and led to a controversial tightening of regulations for regional stations to ensure that if stations were sold there would be no decrease in local news and information content.

During the 1990s Southern Cross Broadcasting evolved into a large and profitable integrated radio, TV and film production business under the leadership of Managing Director Tony Bell, which was sold to Macquarie Bank when cross media ownership rules were relaxed. In another ownership shake out during 2007, Fairfax Media acquired Macquarie Southern Cross Media's capital city radio stations and established a radio division under the leadership of Graham Mott, leaving Southern Cross Media to consolidate itself as a regional radio and television operator.

In 1997 one of ABC Radio Australia's main transmitter sites in Darwin was closed down because of government funding cutbacks, resulting in its status and staffing being dramatically downgraded. Since then Radio Australia has developed new transmission outlets through the internet and with rebroadcast partners, pioneering a new multimedia strategy for communicating Australian views to the world.

ABC Radio's domestic networks have also developed new strategies for reaching audiences in recent years, embracing the internet and multimedia to connect with audiences beyond their traditional radio sets. In the early 2000s, ABC Radio expanded its NewsRadio network and created a range of 'Dig' internet radio channels which have now expanded to the digital radio platform. Because of the complexity of integrating network and local programming across an ever-increasing number of AM and FM transmitters, ABC's local radio network dropped all its historical call signs (2BL, 3LO, etc.) at the beginning of the new millennium and renamed them by their frequencies and cities, such as 702 ABC Sydney and 774 ABC Melbourne.

Between 1999 and 2000 a number of commercial talk radio stations came under scrutiny from the ABA's cash-for-comment enquiry that investigated third-party payments to talk hosts at 2UE Sydney and in other capital cities. Recommendations from this enquiry tightened up the codes of practice, and led to increased vigilance against payments that may influence the editorial opinions of current affairs announcers which are still in force.

In December 1999 the ABA decided to license new commercial

FM stations in the major capital cities, with DMG bidding successfully for all of them and introducing the 'Nova' network under CEO Paul Thompson and Group Program Director Dean Buchanan. DMG then outbid all rivals to gain second licences in Sydney and Melbourne, building stations named 'Vega' for an over-40 target audience. In 2010 the Vega stations, which had failed to gain significant ratings, were rebranded as 'Classic Rock'.

Well-known talk radio announcers during the first decade of the new millennium included 2GB's Alan Jones in Sydney, Neil Mitchell and Derryn Hinch at 3AW Melbourne, 5AA's Leon Byner in Adelaide and 6PR's Howard Sattler in Perth. On ABC Radio Ian McNamara is a household name with his national Sunday program *Australia All Over*, and Radio National presenters Geraldine Doogue, Fran Kelly and Phillip Adams are also well known.

In April 2010 a new talk station, Melbourne Talk Radio 3MTR, launched on 3MP's old AM 1377 frequency. It was spearheaded by talk radio personality and program director Steve Price and backed by 2GB owner John Singleton in a joint venture with licencee Pacific Star Network. Up until the launch of 3MTR, only one commercial talk station had been on air in Melbourne since the failed CBC talk radio syndication venture by Kerry Packer in 1986.

Septuagenarian John Laws retired in 2007 after 55 years in radio. While Laws says the cash-for-comment enquiry took its toll on him, he was still as enthusiastic as ever about his radio program before he retired. When asked about the highlight of his radio career he told *radioinfo*: 'Tomorrow's program—every day is a highlight in this business.'

In 2009 the ACMA tightened standards relating to exploitative competitions and stunts involving minors when a 2Day FM breakfast competition went wrong. Hosts Kyle and Jackie O gave a teenage girl a lie detector test about her sexual history but did not know that she had been raped, a fact that was revealed live on air, causing much controversy.

Austereo's networked duo, Hamish and Andy, were the country's most popular drive presenters in 2009 and 2010, combining their award winning live-to-air program with re-edited podcasts and a heavy presence on social networking site Facebook.

The advent of the internet, audio streaming and digital radio has moved radio into the digital domain, allowing it to reinvent itself again for another new generation of listeners who consume radio through many new digital devices. They are used to having more control over choice of programming than listeners from any previous generation and they are more demanding than ever of radio companies.

Digital free to air radio, using DAB+ technology, is one way of keeping up with new consumer demands and this latest round of technological change. In 2009 digital radio was launched in Australia and a whole new group of digital radio stations were introduced, including DMG Radio's Koffee and Novanation, Austereo's Radar and Jelli stations, ABC's Dig Jazz and Country stations and a range of others. The story of how digital radio came to Australia is told in the next chapter.

The three dominant sectors of Australian radio—commercial, public and community—all have different approaches to the way they run their stations, the way they interact with their listeners and the way they make their programs. Each sector is a business, but each business model is very different. Commercial radio is a profit-driven business, public radio is a public sector business with a mission to serve the national interest, and community radio is a non-profit business which should return benefits to the particular community it serves. The history of Australian radio has resulted in the evolution of a robust, competitive and complementary radio industry, which has served this country well in the past and will continue to do so into the future.

USEFUL WEBSITES

<www.abc.net.au>
<www.cbaa.org.au>
<www.cbonline.org.au>
<www.commercialradio.com.au>
<www.radio.adelaide.edu.au>
<www.radioinfo.com.au>
<www.waynemac.com>

2. DIGITAL RADIO IN AUSTRALIA

Steve Ahern

Australia has adopted the world's most advanced system of digital radio, called DAB+. This chapter will explain digital radio terminology, the different types of digital radio transmission being used across the world and the benefits of this new type of transmission technology. It will also examine the case study of Australia's successful launch of digital radio.

WHAT IS DIGITAL RADIO?

Digital radio is a new type of transmission technology which works in a similar technical way as audio streaming does on the internet but it is broadcast on free to air transmissions.

Most radio studios have now converted to digital (see Chapter 4). That means the signal leaving the studio is encoded into bits and bytes, the same way as data is created and stored in computers. Once the signal leaves the studio it remains in digital form and is carried to the transmitter by studio-to-transmitter links, dedicated ISDN digital lines, or via broadband internet links. If the originating radio studio is still analog, the signal must be converted to digital with an analog-to-digital (A to D) converter at some point before it reaches the transmitter.

Once the signal reaches the transmission point it is combined with all the other radio station signals in a multiplex, which then sends the combined programming to the digital transmitter for broadcast. This combining stage is different from analog broadcasting in many ways; one of the most important differences is that one transmitter carries signals from many stations. In the past each station had to set up and maintain its own transmission facilities.

Because the transmission chain is digital it can carry anything that can be digitised, not just audio. This is another important difference between analog and digital radio. Digital radio can carry pictures and text in its transmission stream just as easily as it can audio.

Receivers are different too. A new receiver is required to pick up digital radio signals, because analog radios would only hear digital signals as splats and squeals, something like the sound of listening to a modem or fax machine connecting. Digital radio receivers work more like a computer than a radio, receiving the digital stream and decoding it to produce the channel you want to listen to. The receiver is also capable of receiving any other data transmitted in the digital stream, such as pictures and text. It depends on the sophistication of the receiver as to how much of the associated pictures and data the radio can show to the listener; sometimes there is only a line of scrolling text, up to top of the range models which show pictures and text in full screen colour.

HOW DIGITAL RADIO WORKS

The original form of DAB digital radio has been around for at least 15 years and is widely used in the UK and Europe. Australia's form of digital radio, called DAB+, is an improvement on the original DAB Eureka 147 system and has now also been launched in Switzerland, Malta and Italy.

Regardless of how good the digital transmission system is, it would be impossible to fit all the bits and bytes of an uncompressed audio signal into a live transmission without significantly delaying the signal, so it must be compressed by being encoded into a particular file format.

Compression and encoding are terms that refer to the process of taking some parts of the digital file away to make it smaller, while retaining as much of the original sound quality as possible. File formats such as MP3 and WMA are compressed formats used for reducing file size for emailing, storage or transferring over the internet. This quality of file is not desirable for radio because it is usually poorer than existing radio transmissions. The type of compression developed for DAB+ is an MPEG-4 standard called AAC+. Encoded AAC+ files strike the balance between retaining good broadcast quality while reducing the file size for live transmission.

The Australian government has mandated that each existing licenced broadcast station has a right to use 128 kilobits of data per second (Kbps) in the multiplex. A DAB+ multiplex can transmit about 1.5 Mb of usable data in total, so that means there is enough room for about 12 stations at full bit rates to occupy each transmission multiplex. In reality, the advanced AAC+ encoding being used in Australia allows stations to go to air in better than FM quality using half or less of that bit rate. So in fact every station which had an existing frequency in analog radio can effectively get two or more stations in digital, depending on what bit rate they choose for transmission.

Audio quality can be adjusted by changing the bit rate. The more kilobits per second you use for the audio part of the signal, the better quality it will be. A talk station or a race call station for instance, which mainly broadcasts voice, does not need to have full 64 Kbps FM quality for its channels, so it has the choice of starting more lower quality channels or of using the excess data stream to transmit other data such as pictures of finishing post photographs, logos or sponsor graphics. A classical music station, on the other hand, may want even better quality transmission than standard FM quality, so may choose to use more than 64 Kbps of its allocation for its audio stream to achieve near-CD quality audio.

Because the multiplex allows flexibility, stations can choose what bit rate they allocate to audio quality and what they do with the other kilobits. With digital stations now on air in Australia's main population centres, there are a range of examples of successful transmissions at low bit rates. Good FM quality has been achieved by commercial music stations using bit rates of 57 Kbps. Several talk channels are on air at bit rates as low as 48 Kbps and still produce better than AM quality.

Within the multiplex there is also an allocation of bits to the transmission stream itself to ensure a more robust signal and better transmission. This is also adjustable and is discussed further in the section 'Australia's introduction of digital radio' in this chapter.

WHY CHANGE FROM ANALOG?

There are a range of compelling reasons for radio broadcasters to go digital. One of the most important is so that radio will not be left behind as other competitive media move into the digital domain. Computers, the internet and mobile phones are digital, digital book and newspaper readers are now on the market, television is going digital and its analog spectrum is being progressively switched off.

If the radio industry remained as it is it would be left in an analog ghetto which, eventually, could mean sets would become difficult to obtain and radios would not be fitted into new digital receiver devices. The move to digital radio is the radio industry's long-term strategy to remain relevant and give itself the power to reinvent the offering it makes to its consumers.

When TV challenged radio in the 1950s, the industry looked around the world to identify new formats and technologies to help it compete with the new medium. It found FM and niche formats (see Chapter 1) and developed them into an Australian model which reinvented radio and kept it relevant to changing consumer habits. The same is happening now in the face of the new technological challenge from computers and the internet, and this is why the radio industry is responding.

But don't panic! Your favourite AM and FM stations will not disappear yet.

All existing stations have a place in the digital transmission stream and nobody expects analog radio transmission to be switched off for many years. There are about 37 million analog radio sets in Australia, with an average of 5 radios per home. It would be a brave politician who legislated to turn off analog radio until most of the population had at least one digital radio. Expect analog radio to be around, in parallel with digital, for a long time yet.

Other reasons for the change include the fact that the older transmission technology, AM, is seriously compromised in major population centres from electrical 'noise'. Fluorescent lights, generators, trams, cordless phones, remote garage door openers and many other devices interfere with the reception of AM radio. In Melbourne, for instance, the city's tram lines make it almost impossible to listen to an AM station in buildings and cars within the CBD. At present FM is not so badly affected by interference but does suffer from multipath distortion in cities, which will be eliminated by digital (see Chapter 19 for more on transmission).

With other players wanting to get hold of spectrum, but large chunks of it being held by radio and TV broadcasters, radio and television were increasingly under pressure from other players, such as mobile phone companies, to give up some of their airwaves for other uses. The Australian radio industry wanted to take control of its own destiny by securing digital spectrum now and for its future rather than finding that one day, when it eventually wanted to go digital, there was no spectrum left to accommodate that transition because other players had lobbied governments to give it to them.

Competition is another factor in the decision to change from analog broadcasting. Mobile phones and wireless internet are fast developing their own models for transmitting audio to their customers, with the potential to lure audiences away from radio. The spectre of external competition was also a factor in the radio industry's decision to go digital.

BENEFITS AND DOWNSIDES OF DIGITAL RADIO

Reception

As described above, digital radio will dramatically improve reception where AM radio suffers from interference. In the vastness of Australia, however, AM radio does have an advantage. Outside of cities an AM signal can carry for a huge distance, which is important for rural and remote stations in this country, which need to cover big licence areas. The DAB+ transmission system was not originally designed for huge coverage in the same way as AM, and there are fears that the cost and technical difficulties of setting up DAB+ towers to cover large regional and remote areas may be too costly for small stations to bear. There are other variations of digital radio technology which may be useful for regional Australia, such as DRM and direct satellite delivery to homes. Time will tell how the industry copes with this complexity.

Transmission costs

Digital radio uses less power, making it 'greener' and cheaper for station owners. The costs of transmission are shared between all stations broadcasting from each multiplex, reducing the cost per station to very low amounts when compared with AM or FM transmission costs. The bad news is, for the foreseeable future until analog is switched off, stations are transmitting in both analog and digital, significantly increasing the costs of transmission in the interim.

Spectrum efficiency

Because more stations can be squeezed into the same bandwidth with digital encoding, there is a much smaller range of broadcasting spectrum required for digital radio. This 'spectrum efficiency' is a win–win situation for broadcasters, other spectrum users and government, as it frees up spectrum for more players to use the airwaves to transmit services. Governments are looking forward to the revenue they will receive when analog stations are eventually switched off and newly freed-up spectrum is sold to the highest bidder.

New receivers needed

You need to buy a completely new receiver to hear digital radio. The downside of this is that people do not readily replace their old radios until they break or there is some other pressing need. Unlike mobile phones, which are 'upgraded' often, radios are seen as a one-off purchase by many consumers. The challenge is to convince consumers to buy new radios or to convince manufacturers to put digital radio receiver chips in integrated digital audio devices and into cars.

The promise of crystal clear sound

Digital radio systems often promise 'crystal clear sound'. This is an exaggeration and listeners sometimes find it is a false promise. If stations use the highest bit rates and the most robust transmission formulas and the listener puts their radio in a good location, then crystal clear sound will be achieved. But in reality there are still black spots or interference and digital radio is not always perfect. Digital radio is susceptible to signal degradation just like any other transmission system, sometimes heard as a kind of bubbling of the signal. And like any digital system, the error correction is very good at keeping the signal stable up to a certain point, but beyond that point what is often called 'the cliff effect' happens and the signal falls completely over a cliff, going from good to silent in an instant. Listeners who have got used to the slowly degrading signals of AM and FM at least get an audible warning that they are entering a bad listening area and quality is diminishing. The cliff effect is so sudden on digital radio that it is often very frustrating for listeners. Speakers are also a weak point. If the radio has poor quality speakers then the best transmissions in the world will still sound tinny and scratchy. Digital radios with poor quality speakers do not do the industry any favours.

Rewind radio

Rewind is not necessarily a unique feature of digital radio, it is a feature of storage technology in a radio receiver. Rewind is simply a digital record and replay feature within the receiver set, and can be applied to AM or FM as well as digital radio. The fact that a signal is digital, however, means it can be more easily stored and manipulated without conversion, whereas analog signals need to pass through another process before being recorded. Therefore rewind is more likely to be offered in digital radios (and iPods and MP3 players) than in analog radios.

DIFFERENT DIGITAL RADIO SYSTEMS IN USE ACROSS THE WORLD

DAB and DAB+ are not the only types of digital radio in use across the world. This section briefly describes other digital radio broadcast systems.

In the early days of broadcasting, radio had a dilemma. Radios made in different countries received only some of the available transmission systems (SW, AM or FM) and, to make matters worse, the broadcasting services bands were different in many countries. That meant people who bought a receiver in one country could not use it in others. This problem was solved by the introduction of world standards on radio broadcast frequency bands and the manufacture of multiband receivers which picked up every radio transmission type.

Digital radio faces the same dilemma today, and the same solutions will be needed to standardise digital radio as the various transmission systems develop. Whatever technical solutions are decided upon, it is imperative that digital radio works first time every time for the consumer, wherever they are, no matter what the technical considerations happen to be.

Digital audio broadcasting (DAB)

DAB, and now the improved version DAB+, are based on DMB (digital multimedia broadcasting) standards from the Eureka 147 system. DAB was first introduced in the UK and Europe and older DAB sets are not compatible with the DAB+ standard. Newer DAB sets that are upgradable to DAB+ are now being made. DAB and DAB+ operate in new frequency bands, with DAB+ being two to three times more spectrum efficient than DAB.

There are currently hundreds of models of commercially manufactured DAB receivers on the market and dozens of DAB+ models, with new models being introduced each year.

Digital radio mondiale (DRM)

DRM is another variation on the DMB standard and uses some of the same encoding as DAB. The two systems are potentially compatible, but DRM operates in existing frequency bands while DAB requires new spectrum.

With DRM it is possible to simulcast your analog and digital signals from the same transmission tower on the same spot on the dial, in contrast with DAB, which needs new spectrum. This is seen as an attractive option for some broadcasters who do not want to move to new frequencies and do not want to build and share new transmission facilities.

DRM is being extensively used in the short wave bands, for which it was first developed, dramatically upgrading the scratchy signal of international short wave broadcasters around the world. In our region, Radio New Zealand International currently uses DRM with great success to transmit programs to Pacific Island countries, which rebroadcast news and programming on their own transmitters. DRM can also transmit in the AM band, and the latest evolution of DRM, called DRM+, is aimed at providing digital transmission in the FM bands. At the time of writing, trials were still being conducted on DRM+. Russia and India are two large countries which have committed their national broadcasters to adopt the DRM standard.

Like DAB and DAB+, new receivers are required for DRM. There are currently only a small number of receivers being commercially manufactured to receive DRM, although this number is expected to grow if more countries adopt the DRM transmission standard.

The acronym for digital radio mondiale, DRM, should not be confused with the same acronym used for Digital Rights Management, which is an altogether separate issue for the broadcasting industry in the 21st century but has nothing to do with radio transmission.

High definition (HD) radio

The United States developed an 'in-band on-channel' (IBOC) system which works in a similar way to DRM but does not have compatible standards with either DRM or DAB. The system is also different from DRM in the way it integrates the digital signals with AM or FM transmissions. DRM places the digital signal next to the analog signal on one sideband (see Figure 1), while HD radio places the signal on both the left and right sidebands around the main analog signal (see Figure 2).

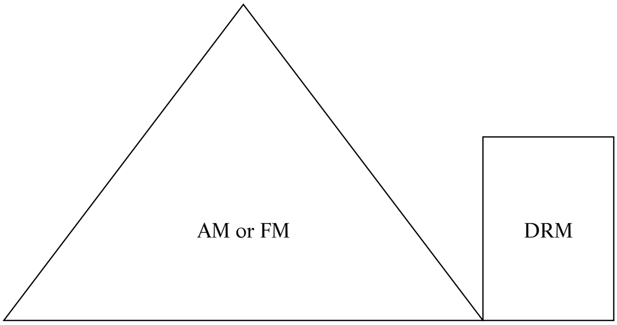


Figure 1. DRM transmission signal

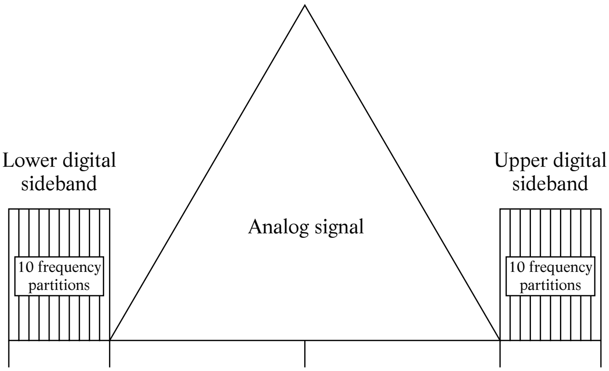


Figure 2. HD radio transmission signal

Because the transmission carries both analog and digital signals, the power of both is reduced. The objective of both the DRM and HD radio digital systems is to provide digital simulcasts on the same frequency bands immediately, with the long-term goal of eventually turning off the analog transmissions and enabling greater digital signal strength once analog is no longer used.

In the United States, where there are thousands of radio stations, about 2000 of them are simulcasting in HD radio and there are another 1000 new HD radio formats being transmitted. At the time of writing, however, HD radio was still experiencing power and interference issues in the crowded American airwaves.

One strength of HD radio is the way it has been marketed in the United States. To consumers who are not educated about digital radio the term HD says it all. HD, or high definition, has come to mean bigger, better and more modern to consumers who have learnt about HD from big screen TVs. The HD radio brand has successfully piggy backed on this concept to extend that perception to radio in what is an example of very clever marketing.

Digital multimedia broadcasting (DMB) audio

DMB uses a similar standard as DAB and DRM, but is 40 per cent less spectrum efficient than DAB+. It is a combined TV and radio broadcast technology.

DMB is widely used in South Korea, with a large number of DMB enabled portable handsets and mobile phones in use in the market.

Integrated services digital broadcasting—terrestrial (ISDBT)

Like DMB, ISDBT is a digital broadcast system originally developed for television which can also carry audio services. It is mostly used in Japan, where it was developed, and in some South American countries.

Satellite digital radio

In the United States, a direct to home satellite radio system is available from XM-Sirius. This system uses a form of AAC encoding similar to other digital radio services, but there is one big difference. All the other transmission systems described above are free to air. XM-Sirius uses a conditional access system so that it is only available to subscribers on a pay-for-service business model, using special receivers. It is not, therefore, free to air radio as we know it and have been discussing in this chapter, but it is one of those other audio services mentioned earlier in the chapter that are providing competition for the traditional radio business model.

In Australia, more than 30 satellite delivered radio channels are available on the satellite television carriers Foxtel and Austar. These have a similar subscription business model to XM-Sirius and are not free to air radio channels, although they are marketed as ‘radio’ to the consumer and do compete with the offerings of mainstream traditional radio stations. Many free to air broadcasters have made deals with subscription television companies whereby their stations are also carried on the subscription service so that they can reach as many people as possible. This multiplatform strategy (see Chapter 3) will be important for the radio business into the future.

Australia has licensed several operators to provide free to air radio broadcasts via satellite to remote areas of the country, although it is not widely used. Where it is used there is usually a terrestrial rebroadcast of the satellite signal so that listeners can hear the stations on normal radios, not special satellite receivers.

Internet radio streaming

Like XM-Sirius satellite radio, internet radio streaming is technically not free to air radio, although it too is a digital service and it does use digital encoding.

Even though free wi-fi seems to be almost everywhere in big cities, and computers, iPhones and mobile devices can tap into the internet to get signals, someone still has to pay for internet streaming radio. The free wi-fi provider pays, and if there are too many people using the service it stops working because it requires a great deal more spectrum (bandwidth) than free to air radio to serve the same numbers of listeners. If you use a mobile phone to access internet streaming, you will pay through your telephone bill's data charges.

With internet radio the streaming owner pays more for bandwidth as listeners increase, whereas in the business model for free to air broadcasting the transmission costs are fixed no matter how many people listen.

It is undeniable, however, that internet audio streaming, and its cousins audio downloading and podcasting (see Chapter 3), are other sources of competition for free to air radio broadcasters no matter what their technical classification. Competition will only increase from these sources as more of Australia is wired for high speed broadband in the future.

AUSTRALIA'S INTRODUCTION OF DIGITAL RADIO

After years of testing and policy discussions, the new DAB+ transmission technology was launched in August 2009. The lessons learnt about introducing digital radio in Australia provide an important case study for other countries planning to introduce new digital transmission systems.

At the time of writing, Australian digital radio was only a year old and on air in Australia's five biggest capital cities, potentially reaching 60 per cent of Australia's population. A study released by Commercial Radio Australia in late 2010 showed nearly 500 000 Australians listened to digital radio. Internet radio also had 500 000 listeners (but consider that digital radio had been around for only a year, whereas internet radio had been around for many years). To have reached over 2 per cent of the population in such a short time, compared with other countries, augurs well for the future of digital radio.

There are about 180 000 receiver sets already sold. This may seem a small figure, but when compared with the first year of introduction of similar technologies in Australia and internationally it is a significant achievement. About 70 DAB+ stations are on air and the number is growing. These stations are made up of simulcasts of all existing, full powered, metro-wide coverage radio stations in the market, plus a range of new stations which have been introduced specifically for digital radio transmission.

At the time of writing there are over 70 models of DAB+ receiver on the market, and they are on sale in more than 600 retail stores. The numbers are constantly growing.

Politics and profit: The stage is set

The introduction of digital radio in Australia has not been without its politics. Australia has had a history of protecting the interests of existing media players over potential new players (see Chapter 1), and digital radio was no different. The politics of fear and uncertainty also came into play. By the time Australia introduced digital radio the technology had been on air for about 15 years in other countries, and Australia had been studying it during that time, but it took many years for it to be officially launched. Here are some of the reasons for the delay.

While it became increasingly obvious from late in the 1990s that broadcasting needed to go digital, the government's broadcast regulator—called the Australian Broadcasting Authority, then later merged and renamed the Australian Communications and Media Authority—was understandably cautious about being the one to choose which digital radio system would be used. If the regulator or the Communications Minister were to pick a technology and then it failed, the government and bureaucracy could be blamed for its failure. So they waited for the industry to take a lead and unite to put its backing behind one transmission system. The three systems being seriously considered during that time were DAB, DRM and IBOC (which later came to be branded HD radio).

The industry, however, was divided on its approach to digital radio in the decade and a half before its introduction and did not wish to unite on this issue. Many AM stations were keen to see digital radio introduced, because it would improve their sound and put them on a level playing field with their better-quality FM counterparts. FM players, in contrast, were not too keen on this idea as it would bring more competition, and they did not see any imperative to hurry along the introduction of the new technology in the early years. In the years leading up to digital radio's introduction, more FM spectrum was also auctioned and new FM players came into the market. These new stations wanted to have enough time to establish their formats and their business model before being confronted with more capital outlay and more competition.With this industry disunity, there was no imperative for government to move quickly on the issue.

Another factor was which business model to choose. The UK model, in the face of a dominant BBC and less market competition than Australia, wanted the new technology to introduce new players and new formats into the market to give listeners a greater choice of services. While this was a successful model in the UK, with good public policy outcomes, it horrified most existing Australian radio businesses.

Australia already had more commercial competition than the UK and the commercial sector was much older and stronger than its UK counterpart. Australian radio stations were used to operating their own transmission infrastructure, and the thought of paying access fees to a third player, a transmission provider company, was not acceptable to most in the industry.

Technology was also a factor. When digital radio was introduced in the UK and Europe there were few receivers and the technology was still not mature, so it was inevitable that other countries would watch and wait to see whether it worked as it should. After so many years of hesitation, manufacturers were sceptical that Australia would ever introduce digital radio and were not being given any guidance on what system would be adopted, so a chicken-and-egg stand-off developed with the radio industry saying 'please import receivers into Australia' while manufacturers said 'we will when we see you are serious'. Australia has a relatively small population, so there had to be firm leadership from the radio industry to guarantee it was worthwhile for manufacturers and retailers to make, import and sell digital radios.

Australia is very different geographically from the UK or Europe. It is a huge land mass sitting in the middle of an ocean in the southern part of the world, whereas European countries and the UK are small land masses situated close together with many adjoining borders and relatively close large population centres. It was much easier and cheaper for DAB to provide coverage to small countries than it would be to cover the whole continent of Australia. This also caused regulators and engineering specialists to pause and think of the implications of rolling out digital radio across such a large land mass before embarking on any decisions. Nobody wanted to get it wrong.

Australia's three main radio sectors were also not always in agreement about how to proceed either. The ABC and SBS, with their public service mandates and public policy priorities, wanted to make sure that the national coverage and complex networking that existed in analog could be achieved in digital. Commercial rivals did not necessarily have these priorities. The community radio sector is fractured and diverse due to its voluntary nature and the diversity of communities it has to serve, so stations within that sector were divided about their approach to digital radio. The matter of how to fund community radio's share of costs was also a consideration for stations, which often find it difficult to get enough money to pay the transmission bills let alone consider investment in new digital studio and transmission technology.

Other categories of licence also contributed to the complexity of achieving inter-sector agreement: low powered suburban community licences, off-band licences and narrowcasters.

As well as high powered licences, there are many low powered community radio licences in Australia, especially in the suburbs of each capital city. These are meant to serve parts of each city, but are limited in their power and coverage area so that they do not become city-wide licences. These stations were properly licenced broadcasters and had been around for many years, so they argued that they too should have a place on the digital radio multiplexes. But there were two sticking points. The first was that digital radio multiplex transmissions were designed to cover the whole city and it would be technically difficult to restrict the coverage to these stations to their limited area. The second was that there was unlikely to be enough room on the multiplexes if all suburban community stations were included.

The other two sectors of licenced stations were narrowcasters and off-band licences (called Section 40 licences). Like suburban community stations, narrowcasters are limited in either format or locality and aimed to provide specific niche services such as tourist information. The other category was off-band licences, a category which existed because of an anomaly in the definition of the broadcasting services bands. Australia's official radio broadcasting bands are defined as being frequencies between AM 526 to 1606 kHz and FM 85 to 108 MHz, but most radios receive frequencies above and below these officially defined bands. The most commonly available of these off-band frequencies are between 1607 to 1700 kHz on the AM band, which because they are not officially broadcast bands could be bought easily for a few thousand dollars if available, compared with the millions paid for official broadcast band frequencies. Some entrepreneurial operators saw this opportunity and bought those frequencies to broadcast commercial radio off-band services under rules set out in Section 40 of the Broadcasting Services Act. Of course, those stations also argued that they had a right to migrate to the digital bands when everyone else did.

With this level of complexity the stage was set for an interesting set of power plays as digital radio approached.

THE BATTLE BEGINS: EXTERNAL ENEMIES

It is possible that, without some sort of external impetus, Australia's radio stations would still be debating the pros and cons of digital radio today. It is only because the free to air broadcast radio industry eventually saw that they might lose digital radio altogether that they were galvanised into action on the issue.

World Audio

World Audio was a cashed up company listed on the stock exchange that bought some off-band licences and decided to launch a commercial Section 40 network called Radio 2, beginning with an AM station in Sydney. The format was popular gold music (a term which encompasses Golden Oldies, Hits and Memories and a variety of other formats) and the listening area was not Sydney wide, but the company had ambitions to be a major new player in the Sydney radio market, then eventually Australia wide. There had been, and still are, other Section 40 stations, but the difference was that World Audio did not want to stick to being a niche player: it wanted to be more.

The company launched in 2002 and undertook several large capital raisings on the stock exchange to put together the technical backbones for a network which it planned to broadcast on AM and FM transmitters, online and on digital radio. In the lead up to a final decision on digital radio, which was delayed many times by government, the company lobbied for a place in the first phase of digital radio. It argued that it was a licenced radio station and should have a place like everyone else.

In October 2005, the company's hopes were dashed when Communications Minister Helen Coonan announced a decision that allowed existing fully licenced Broadcasting Services Band stations to move to digital, but not others. At the time, World Audio's Managing Director Andrew Thompson called the decision 'appalling' and said, 'There is no valid reason why we should be excluded.' The minister said, 'They knew the conditions of the licences when they bought them.' World Audio went into administration in 2006.

While World Audio was not ultimately successful as a company, it was a success at one thing: it provided an external enemy which threatened existing industry players' interests and caused them to unite against the challenger.

Andrew Thompson was a strong advocate for the company and debated his position forcefully in many forums. In response, industry body Commercial Radio Australia felt compelled to challenge Thompson on all fronts, a job which it gave to its new CEO Joan Warner. An accomplished lobbyist, Warner was up to the task and fought her corner well, rebutting Thompson on every point. The back and forth debate was covered in many high profile media articles at the time.

Internet

During the decade and a half in which Australia considered its stance on digital radio, the internet went from being a novelty for computer geeks to the mainstream mass media force which it is today.

Radio stations stood on the sidelines as pictures and text, then audio, then video established their place on this new worldwide digital medium. When it eventually dawned on radio stations that the internet might one day take away their audience bit by byte they began to consider the internet as another external enemy. When wi-fi came along it uncoupled the internet from the cumbersome modems and blue cables that shackled it to a desk, promising portable audio delivered by the internet on demand or as a continuous audio stream.

Radio stations came to see that the internet's audio delivery ability made it a viable challenger to free to air terrestrial radio, so the industry realised that it had another external enemy and began to form a strategy against it. In this case the strategy was not to fight it. Music publishers had tried to fight audio file sharing on the internet and failed. The radio industry realised that it had to appropriate the functions of the internet for its own brands to make sure that it could remain progressive. It did and now most radio stations have a significant internet presence with streaming, downloading, websites, listener databases and podcasts being an important part of their business strategy.

This was another factor in convincing the industry that it must be digital, because without being digital it could not easily interface with the internet.

Mobile phones

Almost everyone has a mobile phone today, some people have two. It is hard to think back to the time, only fifteen years ago, when 'mobile' phones weighed more than a house brick and were about as big. When mobile phones were in their infancy the provider companies identified their path to success. It lay in two things: miniaturising the technology and gaining spectrum to deliver their services.

Portability was an important edge that radio had up until mobile phones were developed. This edge helped it combat television. The new mobile phone communications devices promised to deliver another portable piece of equipment into the pockets of content consumers that could rival the portable radio.

And mobile telephone providers wanted spectrum, the same spectrum that the radio industry thought it may one day want to use for digital radio. The radio industry knew it would need that spectrum one day;

it just did not want to use it yet. But mobile providers were offering government good money for that spectrum, and money talks. So successive communications ministers began to say to the radio industry, 'If you don't want it we will sell it to the telcos.' This was the third factor in galvanising the radio industry into action more quickly than it had planned.

The radio industry always knew it would need to go digital; the only question was when. When there was no impetus to hurry the industry was happy to wait and see which technology eventually became dominant. Once these three factors emerged there was no excuse for waiting any longer, and moves to implement digital radio picked up pace.

DECISION TIME

In 2005 the Australian government finally announced a policy on digital radio. It surprised most industry players, who had expected a variation of the UK's DAB transmission model. The Australian government, on advice from its regulator ACMA, adopted a forward thinking approach to digital radio which was based on the UK system but took into account the advances made to DAB in the intervening decade since Australia began to formulate digital radio policy.

ACMA advised the minister to approve the newest type of digital radio as Australia's choice of technology, giving more stations the chance to be on air and guaranteeing a more progressive approach to the technology.

In October 2005 Communications Minister Helen Coonan revealed that the government would mandate use of the Eureka 147 DAB+ system and would give licenced high powered broadcasters 128 kilobits per second of bandwidth, half the recommended amount for Eureka's older DAB system which was in use in the UK. 'Today's decisions will provide public policy benefits for consumers and give maximum flexibility to the industry . . . we are keen to support the industry to make this a success,' said the Minister.

Roll out would be in the most populated and lucrative capital city markets first, followed by regional areas, where DRM was left open as an alternative transmission technology. Low power and off-band Section 40 stations would all miss out on space in the first round of allocations. VHF spectrum was the preferred carrier medium, with L Band being considered for in-fill transmission and other future uses. There was no immediate switch-off date considered for analog radio, in contrast to TV, which had a mandated switch-off date.

Unlike the UK, a transmission licencee model was not adopted and broadcasters got control of their own transmitters but were obliged to form joint venture companies to manage the facilities.

To cope with the complexity of the three main broadcasting sectors all needing to share facilities, the government mandated that the national broadcasters, ABC and SBS, would be required to share ownership and operation of one set of multiplex transmission facilities, while the community and commercial sectors would share the other multiplex. To make sure the big fish, ABC and commercial radio, did not disadvantage the smaller players, SBS and community radio, the government mandated a minimum requirement of two ninths of each multiplex to be available for SBS and community radio stations and appointed the competition and consumer interest regulator, the ACCC, to watch over negotiations.

After all the years of indecision and delay, the threat of an external enemy did indeed galvanise the radio industry into action. With the thought that other players may grab the initiative, and the spectrum, the radio industry moved forward from its previous approach and united to lobby for progress on digital radio. The following years saw a huge effort from all sectors on testing infrastructure, formulating standards, training broadcasters and preparing for the launch of digital radio in Australia.

All of Sydney's breakfast radio announcers at the combined outside broadcast launch of digital radio in 2009

LAUNCH

In August 2009, in an unprecedented show of industry solidarity, more than 40 different radio stations in Sydney, Melbourne, Brisbane, Perth and Adelaide put rivalries aside and broadcast simultaneously to a combined breakfast audience estimated at more than 8.5 million people in a massive outside broadcast to promote digital radio. Commercial, ABC and SBS stations were side by side in open marquees in the main squares of Australia's top five radio markets as digital radio launched. In a world first, all metropolitan commercial radio stations played the same piece of audio at 7.40 am to promote digital radio.

MARKETING

Marketing the concept of digital radio was an important element in its success. The marketing proposition had to explain why consumers should invest in a new radio set and what advantages digital radio would have over their traditional radios.

As Australian broadcasters studied digital radio in other countries they found that much of the marketing for digital radio was too technical and did not present consumers with a compelling new offering that made it worthwhile for them to purchase a new set. The dilemma would be to explain the benefits of DAB+ without worrying or confusing consumers about the technology and in such a way that created enough excitement to generate a sense that consumers 'must have' this new radio device.

The marketing campaign was staged carefully, beginning with industry training and advertiser education, then moving to consumer education, new station hype and receiver sales promotion.

After so many years of inaction the first people to convince about digital radio were insiders. Radio industry staff and management were constantly telling clients and rival media they were sceptical about whether digital radio would ever take off. They were their own worst enemies. To counter this problem, about a year before launch the radio industry enlisted the assistance of the national film television and radio training school, AFTRS, where I was Head of Radio at the time, to conduct all-staff digital radio roadshows in the five capital city launch locations. To demonstrate cross sector commitment, the leaders of the three main sectors were joined by technical experts in a series of workshops that explained the technology and previewed the consumer marketing strategy that was to be rolled out before launch. Hundreds of people attended these seminars and the self-defeating industry white-anting was diminished.

Technical information about digital radio is hard to understand. Other countries had made the mistake of telling consumers too much detail about the technology, which only served to confuse them. Potential consumers really only want to know: 'what's in it for me?'

With this in mind the messages leading up to launch were kept focused.

- To allay concerns that their old stations would be switched off, consumers were assured that they could get all their usual stations on digital radio, plus more.
- To capitalise on the good sound quality that is available (if you are in the right area and have a robust signal), consumers were promised better quality sound than their current radio sets could give them.
- To add 'newness', consumers were told that they could get more from their radios with name and song title, pictures, weather maps and other important information being offered on radio screens.
- To maximise the content offering, each broadcast company was encouraged to put to air as many new stations as possible, offering something different from existing station formats.

Advertisers were also targeted with similar messages, and were informed that they would have pictures, text and interactive options to add to their usual radio advertising strategies. With clients now able to display their logos and scroll additional printed data to consumers, there was a new reason for the radio industry to go back to advertisers to sell them the fresh new advantages of advertising on radio.

Campaign theme

To wrap the messages together Commercial Radio Australia took the lead in the marketing, with full cooperation from the other sectors. It developed a logo, slogan, audio imaging, point of sale pamphlets and videos, campaign artwork, compliance artwork for receivers, and a series of radio ads.

The simple message developed for the campaign was 'It's radio as you know it, plus . . . ' This clever message played on the 'plus' factor of DAB+ and AAC+ for those in the know, but simply meant 'more than we get now' to those who did not have any idea about the technology. It also reassured people that they would not lose anything they currently had, and would get more if they bought a digital radio.

Digital radio launch advertising artwork (reproduced with the permission of Commercial Radio Australia)

The consumer offering

In the initial education phase of the marketing campaign the simple messages were: buy a new radio, get better reception and sound, get new stations, you won't lose your old favourite stations.

As the campaign matured, and digital radio was launched, consumers were introduced to more of the benefits that digital radio had to offer; things like rewind radio, sophisticated screen pictures and interaction.

'Rewind radio' is just what it says, the ability to go back and listen to what was just heard. Perfect for competitions, to check phone numbers and dates, or to hear about special offers again.

While basic radios only have limited scrolling text, radios with high quality colour screens can display pictures, station logos, announcers' photographs and advertiser logos, plus the title of the song playing and artist name.

Interaction is not possible with digital radio alone. Radio is a one way, point-to-multipoint medium. But if you are listening to digital radio on a receiver that has an internet connection or a telephone connection, then web links and phone numbers displayed on the digital radio screen can become active when clicked, yielding benefits for the station and for advertisers.

RECEIVERS

From a technical and consumer interest point of view, it was important that consumers knew that radios for sale in Australia would work and digital radios bought elsewhere may not work in Australia. The marketing logo was made into a compliance sticker and used on radios that had been successfully tested under Australian conditions. Cooperation between regulators, manufacturers, retailers and the radio industry was crucial here.

There are over 70 receiver models on sale at present in Australia, with more being added every month. Most Australians listen to the radio at home, so it was most important to introduce a good range of 'table' style radios early in the launch phase of digital radio. The 'table radio' receiver offerings range in appearance from extremely dull through retro chic to ultra modern and have a range of price points from around $60 to $800. A range of small portable receivers and car radios is also available.

Table radios

Low cost models with a basic screen have sold well to consumers whose priority is better reception. AM radio listeners, usually in the older demographics, have taken up this type of receiver because it is (relatively) low cost, is easy to operate, and has better quality sound than analog models. The Bush model pictured is typical of radios in this

Pure basic mono table radio

Top end Pure Sensia radio

range with a limited character scrolling screen for basic artist, weather and station information. These models have average speaker quality, but they usually have analog and digital outputs for consumers to plug in to better quality speakers if required.

At the top end of the spectrum, digital radios incorporate functions such as full colour screen, touch functions, store and rewind, electronic program guide (EPG) display, prerecording and clock-radio functions. Speaker quality is generally high and the units also have analog and digital outputs. Most top end receivers, such as the Pure model pictured above, also incorporate wi-fi internet radio, audio file sharing across a network and docking for iPods and MP3 players. These receivers generally look modern and hi-tech, appealing to top end sophisticated users.

Portable devices

Portability has been an important factor for radio since the 1950s, so it was crucial to introduce a range of portable receivers into the Australian market early. The most functional of these portable units is the iRiver B50 model, which is a rechargeable MP3 player with FM and digital radio included. It has a good quality colour screen because it was developed for portable TV services in Asia, as well as for digital radio. The unit incorporates USB connectivity to a computer and also has a built-in recorder.

iRiver DAB+ and FM receiver model

The portable device carried by most people is a mobile phone. At this point in digital radio history no digital receivers have been incorporated into mobile phones, but this is likely to change. Consumer pressure has convinced mobile phone manufacturers to incorporate FM radio receivers into their phones, with digital radio receivers expected to follow. The radio industry has also been lobbying mobile phone manufacturers to achieve this aim, although battery power consumption and antenna issues have been two sticking points in negotiations so far.

Car radios

Pure Highway retro-fit car digital radio

Digital radio installation in cars is of growing importance as commuter times increase with the expansion of Australia's major cities. At present there is only one 'retro-fit' digital car radio on the market, and none are factory fitted to new cars. This situation is expected to change as European countries mandate the installation of digital radios in cars and the Australian radio industry works with local car manufacturers to achieve installation in locally produced models within the next few years.

TOPOGRAPHY

Some of Australia's cities have landscapes that are helpful to radio transmission and others have hills and city building that cause severe interference. Because Australia's DAB+ transmissions are in the television broadcast band, at channel 9A, the radio industry had to work closely with the television industry to co-site DAB+ transmitters on television towers. This caused potential political and technical problems which were solved during a series of trials in the year before digital radio was officially launched.

Six months after digital radio was switched on the topography of each city was analysed, yielding good insights into the effectiveness of DAB+ transmissions in each type of landscape. Here is what the experts found.

Melbourne was considered to have the worst coverage because the transmitter has to co-site with television towers which are 36 kilometres from the CBD, requiring higher power to get into city buildings. To complicate matters, Melbourne transmissions must also protect cities to the south (Geelong), the north (Albury) and other adjacent areas, which is a difficult balancing act due to Victoria's flat landscape. Black spot low powered in-fill transmitters have been installed to supplement coverage in Melbourne's CBD.

Most other cities did not have problems as significant as Melbourne.

Perth is a relatively flat area and the transmitter is high on an escarpment, so coverage in most areas of Perth is solid.

Adelaide transmission is considered the best in Australia, because the transmission towers are located on a high mountain almost in the centre of the CBD.

Sydney had difficulties behind the hills to the west of the city due to the location of the television transmitters in Artarmon, but the CBD and most suburbs were reporting good reception once the transmissions went to their full 50 kilowatt power and in-fill transmitters were installed in black spots.

Brisbane had coverage problems to the north of the city because the transmission site on Mt Cooper required a sharp 'null' to the north in order to protect ABC TV on the Sunshine Coast from interference.

PROGRAMMING AND NEW STATIONS

The digital radio medium is new and relatively small numbers of people are listening. So there is a chance to experiment with very little to lose. Many stations have approached the new frontier of digital radio adventurously, taking advantage of its newness to experiment with new formats. Below are details of some of the new digital only stations which went to air in the first year of digital radio transmissions.

ABC stations

ABC Radio developed the 'Dig' format online first, before digital radio was launched, to refine the concept and build infrastructure before going to air on DAB+. The main channel, called Dig, is short for digital and also suggests that the station digs deeper into the ABC's music library than other networks to reveal new music and little heard artists. The Dig format could be characterised as 'Triple J for adults', because its alternative music format is similar to Triple J's but is aimed at an older audience than the under-30 year olds targeted by Triple J.

Two other channels have spun off the format—ABC Country and ABC Jazz—specialising in these niche music genres.

SBS stations

SBS Radio broadcasts programs in 68 languages, serving Australia's multilingual population. SBS Radio's two main channels only have a limited amount of hours each week for each language group, so it has launched four more language channels.

SBS has also begun an Asian pop music channel called Pop Asia, and a world music channel called Chill.

Koffee and NovaNation

DMG Radio launched two stations, Koffee and NovaNation. Koffee is a smooth pop station with elements of jazz mixed into the playlist. It is designed for long time-spent-listening in a background environment. NovaNation builds on DMG's strong Nova brand, pushing it further niche than the main channel by playing all dance tempo tracks.

Jelli and Radar

Austereo's Radar Radio plays unsigned bands and new artists. The playlist is tightly selected, alternative sounding, well-produced songs uploaded to the station's website. Jelli is also interactive, with listeners voting for the songs they like and influencing the number of times they are played on air. Both stations have a significant internet presence and high interactivity with their audiences.

The Edge

The Australian Radio Network's new digital station is the Edge, which plays hip hop, rap and urban styles of music. The target audience is teenagers.

Pop-up stations

Austereo and the Australian Radio Network have also launched short term stations such as Elf Radio at Christmas time and specialist artist stations such as Pink! Radio during performers' national concert tours. Most of these special pop-up themed stations have had one major sponsor, usually associated with the artist or event. ABC Radio has also popped up special event stations to commemorate the anniversary of the 1969 Moon Landing and the groundbreaking 1960s Woodstock music festival.

The Buckle

The Buckle is a commercial country music format launched by Fairfax Radio. It is more mainstream in its popular country playlist than ABC's equivalent 'Dig Country', and plays artists with high familiarity and visibility, particularly American country artists.

Hot Country

Hot Country is another narrowcast country music format, launched by the Grant Broadcasters network. It differentiates itself from the Buckle by playing more Australian country songs, and is more upbeat and contemporary in its format sound while attempting to form closer links with regional country music festivals. It is currently heard in Perth, Canberra and Darwin on the digital platform, however, it can be heard on FM in regional markets where Grant Broadcasters and its business alliance partner Capital Radio Network operate.

Gorilla Radio and Zoo

Part of Bill Caralis' Supernetwork, this station plays modern pop music from the 'nineties and noughties', with several live shifts. The live shift component distinguishes Gorilla from other formats, which are largely automated at this early stage of the development of digital radio. In keeping with the animal name theme, Supernetwork has also launched a second channel, called Zoo. Supernetwork owns a pop format FM station in the NSW regional town of Dubbo which has the same brand name.

Racing Radio

Sky Racing Radio has used the opportunities afforded by digital radio to mount a second racing audio channel to broadcast races that would otherwise have conflicted with each other. The technical team at Racing Radio have also developed significant picture and data interfaces for the digital radio screen, displaying betting odds, photo finishes and payment figures for each race.

Comedy stations

Macquarie Radio Network has partnered with a private content provider to broadcast comedy on the Crack. The station plays classic comedy skits such as Monty Python, locally recorded stand up comedy, novelty and comedy music and soundtracks from TV comedy shows. Austereo has also launched a comedy channel, with the unlikely name of Barry, which replays comedy segments from Austereo's main stations and contemporary comedy.

PICTURES AND TEXT

While better sound quality and new stations appear to be the initial motivation for consumers to buy new digital radios, there is mounting evidence that once they have enjoyed the picture and text screen experience that this also becomes a motivating factor for increasing use of digital radio.

To be able to offer simple enhancements such as telephone numbers and web addresses is an important extra for radio, which has always struggled with how best to communicate numbers, dates and addresses, which usually work better in written form. Displaying the name of the song and artist playing is also proving to be a valuable enhancement for listeners. Along with the ability to display the name and photo of the person being interviewed, or an advertiser's logo, the added value of digital radio becomes evident.

Digital radio is not television. No one will 'watch the radio' as they do TV, but consumer studies indicate that people glance at the digital radio screen when they want to check something. 'Referability' will be considered a valuable element of digital radio in the future as more receivers offer enhanced screen displays.

A range of standards have been adopted by the Australian radio industry to ensure that audio, text and graphics are consistent and can be displayed properly on all types of screens. The standards are listed below.

Audio

- File format: 16 bit, 48 kHz, uncompressed PCM audio
- Header: EBU BWF (broadcast wave file) format
- Duration: within 1% of prescribed length

DLS (dynamic label service)

- 128 characters max per label
- Font style: determined by the receiver
- Font size: determined by the receiver

Images

- File formats: JPEG; PNG; APNG
- Size: 23 kilobytes maximum
- Aspect ratio: 320 w × 240 h
- Orientation: landscape
- Animation: 10 frames/second maximum
- Tagging standard: EXIF image data

When creating audio files such as advertisements, promos or imaging with associated screen content for digital radio, remember to comply with these standards.

USEFUL WEBSITES

<www.acma.gov.au/WEB/STANDARD..PC/pc=PC_90188>
<www.bbc.co.uk/rd/pubs/papers/paper_21/paper_21.html>
<www.digitalradioplus.com.au/files/news/1%20%20Digital%20Radio%20Industry%20Report%2022%20Mar%202010.pdf>
<www.drm.org/drm-the-system>
<www.etsi.org>
<www.hdradio.com>
<www.itu.int/en/pages/default.aspx>
<www.itu.int/ITU-R/index.asp?category=information&rlink=warc-79-30years&lang=en>
<www.radioinfo.com.au/news_item.php?id=4573>
<ukdigitalradio.com>
<www.worlddab.org>

3. RADIO 2.0 IN THE DIGITAL AGE

Steve Ahern

'You had your time, you had the power. You've yet to have your finest hour . . . Radio.'
'Radio Ga Ga', Queen

Radio now exists in a multiplatform world. To work in radio in the 21st century you will need to have a wider range of skills than ever before, and will also need to think beyond the traditional radio transmitter to understand what is required for a successful career.

When the second generation of interactive internet sites such as Facebook and Twitter were developed, commentators named the advancement Web 2.0. In a similar way, radio's convergence with new online and digital platforms is moving it into a second generation of interactivity using new platforms to connect with its listeners, which I have called Radio 2.0.

The Radio 2.0 world is more about content than the transmission platform. The phrases 'platform neutral' and 'platform agnostic' are often used to help broadcasters see beyond the old idea of a single transmission path, to grasp the fact that the business model for radio has evolved. To survive in the Radio 2.0 world, where there is more competition than ever, will require radio broadcasting companies to rethink their business plans, going beyond the concept of being a 'radio' business to describing themselves in terms of the content they produce.

Stations which produce music and personality radio will be more successful if they focus on the fact that they are entertainment companies rather than radio broadcasting companies. Talk radio stations are better characterised as information providers. If you correctly define your business model for the new century it will be easier to succeed than if your mindset is limited only to one single transmission stream.

Radio is now more than a century old. It has faced competition before and survived. It will survive into its second century if the industry reinvents itself as it has done in the past (see Chapter 1), finding successful ways of incorporating and competing with new challengers.

Why will radio survive? Because it is a portable audio medium. People still want to carry around portable audio which they can consume while they are doing other things.

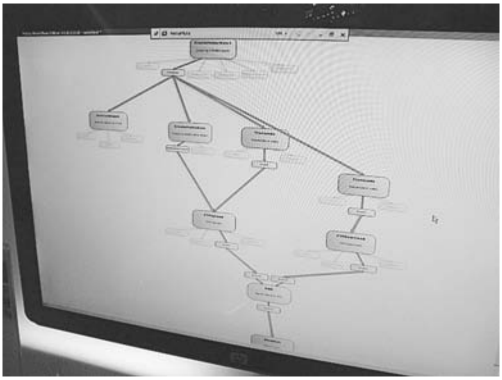
Studies show that one third of the population is auditory, using sound as their preferred primary medium of learning and communicating. The other thirds use visual and kinesthetic skills, where sight and touch are their primary way of learning and communicating. This factor in human development alone means that audio will always be the primary preferred method of communicating for at least one third of the world's population, enough to guarantee that many people will want to listen to audio for a long time to come. Add that to those who want portability, convenience and company, then the percentage of people who need audio at certain times becomes even higher.

Notice the references to this medium as 'audio' rather than 'radio' in the past few paragraphs. It will be better to think of yourself as being a maker of audio content into the future, rather than just someone who works in radio. This will put the focus where it should be, on content and consumption patterns rather than on the transmission medium.

CONTENT MAKERS

As discussed in the previous chapter on digital radio, content makers will now need new skills, such as graphic design and an understanding of picture file types and sizes. A good picture or graphic for a digital radio screen will generally be close up, because wide shots do not reveal much detail on small screens. It will also have good contrast, not be too cluttered, be the required file size, and fit within the mandated screen ratio. Content makers will need to know how to spell correctly if they are writing text for publication and will require a basic understanding of graphic design.

Radio 2.0 is multiplatform. Going beyond the radio dial and digital radio screen is commonplace for radio stations now. Everyone has a website and multimedia content is everywhere. So video capture and editing skills are also required for Radio 2.0 content makers. The same principles for still graphics discussed in the previous paragraph apply to video skills. File sizes must be correct for quick loading and the appropriate file format,



Netia workflow screen

such as flash, WMV or MOV, must be chosen to deliver the best user experience and to be consistent with other content on the webpage. The cameraperson will need to know the basics of film making as they relate to small screen online consumption, such as avoiding moving camera techniques, not panning too quickly because compressed video files often distort fast camera panning, and observing good light and contrast principles. Simple video editing skills will also be required. Keep in mind that just because you may have a powerful movie editing program on your desktop does not mean you have to use every type of wipe, fade or other visual trick that the software offers. Similar to the principles of good audio editing, often less is more. If the characters tell the story well, the lighting and sound are captured well, backgrounds and illustrations enhance the content and there is a clear and logical sequence, then editing tricks can be kept simple for small screen consumption.

Integrated workflow software such as Netia's combined audio and video editing systems (pictured above) have the ability to create set-and-forget publication paths that simplify the process of file conversion for publication to many platforms. Radio 2.0 employees who want a long career will need to learn how to control these systems and set up workflow processes within them. Fortunately the control process is very intuitive and the user interfaces are usually 'drag and drop', so that operating them is not particularly difficult. Strategising the program outputs and the workflow paths is the higher level skill which will be required at content management level.

INTERACTION, CITIZEN JOURNALISM AND USER-GENERATED CONTENT

In 1968 Andy Warhol predicted, 'In the future, everyone will be world-famous for 15 minutes.' In the interactive world of new media content creation, I predict that everyone will create their own 15 minutes of media content at least once in their lives.

Children in primary schools learn media literacy by creating and deconstructing radio and TV shows. The means of content capture is in almost every mobile phone, so it is not difficult for non-media people to be content gatherers in the modern world. The technology of audio and video capture is no longer the preserve of media companies with expensive cameras and audio recorders. Everyone has access to it now, and they are using it. Karl Marx's analysis of the industrial revolution, where ownership of the means of production was often a way of keeping the mass of people outside the industrial power base, could also have been applied to the old media world, where expensive capture and broadcast equipment was needed to be a media publisher. Online media, cheap content capture and editing software combined with readily available computers and mobile phones put the means of media production in everyone's hands. If traditional media tries to exclude them, those self-taught content creators will simply bypass traditional media and set up new channels of publication. Smart radio businesses see this and are opening the doors to content contributions from their listeners.

In a recent presentation to the Australian Broadcasting Summit, Director of ABC Radio Kate Dundas described the ABC's approach to user-generated content, saying: 'We need to be everywhere our audiences are, whenever they want us and on whatever device they choose. Our future is also making and sharing content *with* our audiences, not broadcasting *to* them.'

Citizen journalism

Citizen journalism is changing the way content on radio, and other media platforms, is produced. User-generated content, a term for both journalistic and non-journalistic content, is another way to describe this trend.

Consumers can more easily create and contribute their own stories and content to a broadcasting station, podcast aggregator or website. In the past, radio was always open to users and citizen journalists creating content. It was called talkback (see Chapter 13 for more on talkback). So radio announcers and producers already know how to handle user contributions; it is just a matter of migrating the skills of news gathering and talkback production to new media to ensure that radio remains at the forefront of the new ways of gathering and disseminating user-generated content that are constantly being developed.

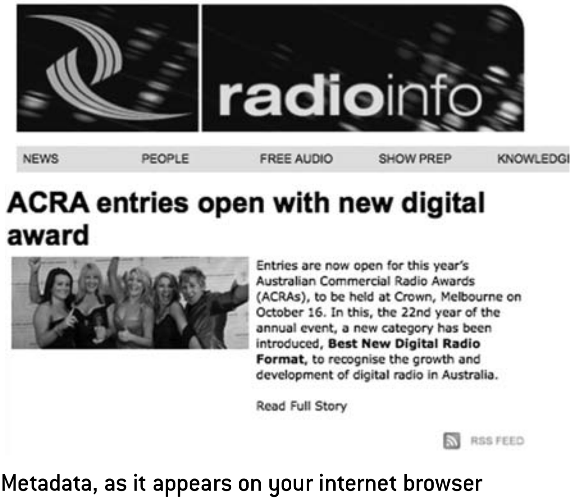
Structural changes to radio staffing are already taking place as a result of the ease in which listeners and media users can contribute content. It is highly likely that on-the-road reporters may decrease as newsrooms rely on citizen journalists to contribute eyewitness audio reports, mobile phone photos and in-the-spot audio and video. While there may be a decrease in one type of job, it is highly likely that the higher order job of editor in a newsroom will be in greater demand, because the editorial skill of checking contributed reports will be the only thing that will guarantee the credibility of content contributed by non-staff members and will distinguish serious media companies from amateur blogs and unattributed gossip sites.

Personalisation

Metadata is the secret language of computers. They communicate with each other on the internet using hidden meta tags and content flags that look like this when viewed in the source code:

```
<HTML> <HEAD> <TITLE>radioinfo main index</TITLE>
<META CONTENT=‘media, radio, jobs, radioinfo, Australian Radio’
NAME=‘Keywords’> <link rel=‘alternate’ title=‘radioinfo RSS’ href=‘http://
www.radioinfo.com.au/rss’ type=‘application/rss+xml’>
<SCRIPT language=‘JavaScript’>
<font size=‘1’ face=‘verdana, helvetica, sans serif’>Entries are now open
for this year’s Australian Commercial Radio Awards. In this, the 22nd year
of the annual event, a new category has been introduced, <b>Best New
Digital Radio Format</b>, to recognise the growth and development of
digital radio in Australia. <p> <br><font size=‘1’><br><a href=‘news_item.
php?id=9108’>Read Full Story</a><br>
```

This metadata displays on a webpage as formatted pictures and text:



ACRA entries open with new digital award

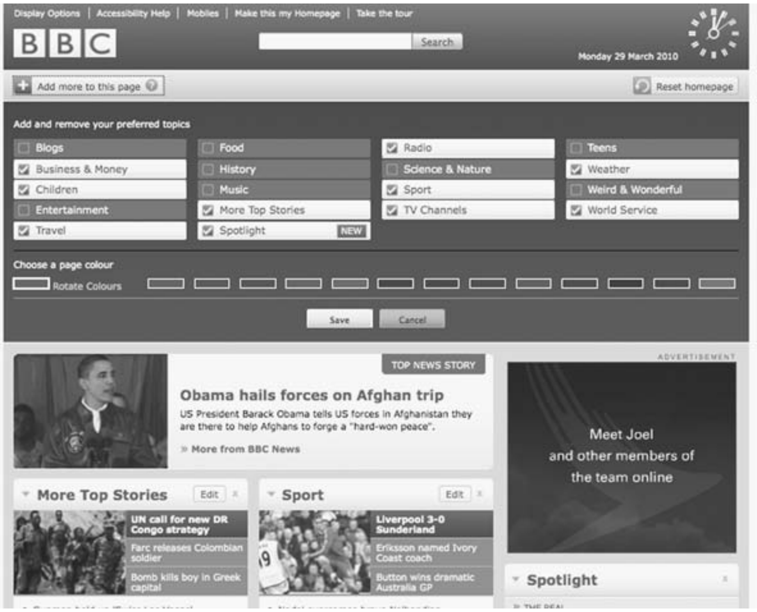
Entries are now open for this year’s Australian Commercial Radio Awards (ACRAs), to be held at Crown, Melbourne on October 16. In this, the 22nd year of the annual event, a new category has been introduced, **Best New Digital Radio Format**, to recognise the growth and development of digital radio in Australia.

Read Full Story

Metadata, as it appears on your internet browser

Understanding how the data behind each webpage and interactive phone screen works is crucial to Radio 2.0 employees. Once you understand that you can manipulate the data to give individual users exactly what they want.

Personalised webpages, such as the BBC example below, use metadata to allow users to choose how they want the page to appear on their screen, leaving out (in this case) elements such as blogs and entertainment and including topics such as business, children and money. RSS feeds are another example of personalisation. Using RSS, an aptly named acronym for 'really simple syndication', a user can configure their web browser or mobile phone to ingest content based on key words or topics they are interested in. The RSS feed reader will alert users to the arrival of new content, like a news flash, or let the content sit there in a section of the phone or browser until the user is ready to read it.



Monday 29 March 2010

Add and remove your preferred topics

☐ Blogs
☑ Business & Money
☑ Children
☐ Entertainment
☑ Travel
☐ Food
☐ History
☐ Music
☑ More Top Stories
☑ Spotlight
☑ Radio
☐ Science & Nature
☑ Sport
☑ TV Channels
☐ Teens
☑ Weather
☐ Weird & Wonderful
☑ World Service

Choose a page colour

☐ Rotate Colours

Obama hails forces on Afghan trip

US President Barack Obama tells US forces in Afghanistan they are there to help Afghans to forge a "hard-won peace".

» More from BBC News

Meet Joel and other members of the team online

More Top Stories

UN call for new DR Congo strategy
Farc releases Colombian soldier
Bomb kills boy in Greek capital

Sport

Liverpool 3-0 Sunderland
Eriksson named Ivory Coast coach
Button wins dramatic Australia GP

Spotlight

BBC webpage showing personalisation options at top

THE INTERNET

The internet facilitates the exchange of information and entertainment across the world on computers. Wireless internet, as discussed in the previous chapter, can bring rich content via the internet to mobile devices.

To stay competitive, Radio 2.0 companies must think about how they can reuse their databases of already rich content to compete with other publishers of content on the internet. Radio 2.0 companies will need to think of content not just in terms of audio, but in terms of video, pictures, text, archives and data, and find ways of linking that to programming and repurposing it for use on many platforms to make 'sticky content' which will entice consumers to keep coming back to their audio channels, their mobile platforms and their websites for information and entertainment.

Mobile platforms

In Australia, the internet and mobile platforms have developed side by side and are both strong interfaces for media content consumers. In many other countries, where the internet has not been as fast to take off because of limited infrastructure, consumers are jumping straight to mobile devices and are expecting them to deliver web content as well as mobile telephony. This phenomenon guarantees that mobile data and internet usage will grow strongly into the future. The introduction of hybrid phone computers such as Apple's iPhone, Google's Android cell phone, the iPad and mobile notebook computer are examples of new technology developments that will continue to increase demand for mobile media usage.

Content producers will need to think about appropriate small file sizes and to-the-point data feed content when developing daily content for mobile devices. Lean clean mobile webpages that give users only what they want while they are on the move will become increasingly important to the offerings of Radio 2.0 companies. They will need to be fast loading and light on data consumption, because mobile devices generally charge by the download and content creators who make their downloads too large and expensive will be shunned by cost-conscious consumers.

CONTENT AGGREGATORS

iTunes is a content aggregator, a portal to content created by other people which is indexed and distributed by the content aggregator. Google, YouTube, MySpace and others are all content aggregators.

The importance of content aggregators cannot be underestimated in the new media world. Portals such as iTunes, MySpace, YouTube and Google Video concentrate the eyes and ears of consumers to one place like the way shopping malls draw in large numbers of consumers who then buy from individual shops. From there they can be sold content; introduced to new music; entertained by user-generated content, mixes and mashups; fed replays of radio and TV shows; and informed with prerecorded lectures, editorials and book readings.

Some traditional media have taken a stand against content aggregators, but that short sighted approach is like someone standing on a beach with their hand in the air commanding a tsunami not to hit them. They will ultimately be washed away. Content aggregators are here to stay and to ignore them or refuse to use them to distribute or repurpose your content is a recipe for disaster. The only real question is on what terms the content sharing deal will be done.

For radio to stay relevant to its consumers in the 2.0 world it must find ways to repurpose its content for many platforms and monetise that content to deliver new returns for the expense of creating it as revenue from traditional broadcast platforms slowly declines. Content with embedded sponsor credits and sales promotions that draw users to interact with the sponsor are two important considerations for Radio 2.0 companies moving to other platforms. In Australia, the internet is not classified as a broadcast medium and the same restrictions that apply to advertising, sponsorship and sales linked promotional content do not currently apply. As long as you act ethically and do not try to trick your listeners, and somewhere in the content declare the sponsor's involvement, then there is nothing to stop a producer repurposing content for the internet that has more product placement or sponsor interaction than it did when it went to air on the radio. Logos, links to sponsor websites and sales content are all possible in podcasts and YouTube videos, so Radio 2.0 employees should look to get more creative on these delivery platforms than they could have when the broadcast first went to air.

PODCASTING, DOWNLOADING AND STREAMING

People often use these terms interchangeably, but podcasting, downloading and audio streaming are three different things. Podcasts are audio or multimedia files which you can subscribe to via an aggregator and have delivered to you each time a new episode is added. Downloads are similar types of files, but you have to go to a site and get them, rather than subscribing and having them automatically fed to you. Streaming uses a completely different file format, which is not intended to be saved, but it made to be consumed in a live continuous stream.

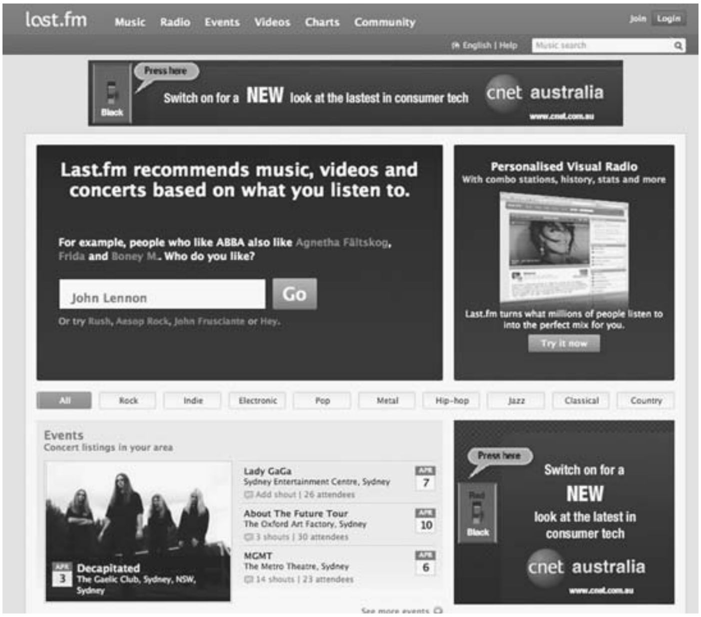
DATA MATCHING AND INTERACTIVITY

While privacy concerns are always as issue, for very good reasons, it is becoming evident that people are willing to give away some of their personal data if they get something in return for it. Interactive online Radio 2.0

services such as Pandora and last.fm have taken advantage of this trend to offer listeners radio stations formatted to their own individual taste.

With a name that seems to predict the demise of radio as we know it, last.fm offers users a personalised radio station. While it is not really a 'radio station' as we know it, the site can offer to its users a playlist of songs that sound similar to the user's favourite artists and will stream continuously until stopped. The user can also tell the site which artists they do not want to hear in the playlist by rejecting songs they don't like so that the streamed playlist will never schedule them again. Sites like this use similar powerful playlisting and scheduling information as radio station music rotation computers; they just personalise it to each user. Austereo's digital radio station Jelli has used a similar concept of 'user-generated music scheduling' to power its playlist.

In return for a personalised 'radio station' users give away some basic personal data which allows the website to display advertisements that will interest them and pass on their contact details, with their permission, to advertisers who may like to target them. It will remain important for jukebox sites like last.fm and radio stations using principles of Radio 2.0 interactivity to behave ethically with their consumers; otherwise those consumers will eventually vote with their feet, exercising the right of consumer democracy not to support the service.



Last.fm recommends music, videos and concerts based on what you listen to.

For example, people who like ABBA also like Agnetha Fältskog, Frida and Boney M.. Who do you like?

John Lennon

Or try Rush, Aesop Rock, John Frusciante or Hey.

Personalised Visual Radio

With combo stations, history, stats and more

Last.fm turns what millions of people listen to into the perfect mix for you.

Events

Concert listings in your area

APR 3 Decapitated
The Gaelic Club, Sydney, NSW, Sydney

Lady GaGa
Sydney Entertainment Centre, Sydney
Add shout | 26 attendees
APR 7

About The Future Tour
The Oxford Art Factory, Sydney
3 shouts | 30 attendees
APR 10

MGMT
The Metro Theatre, Sydney
14 shouts | 23 attendees
APR 6

Last.fm personalises your listening experience

To survive in the world of Radio 2.0, radio professionals will need to be alert to the ever-developing trends of new media and must look for opportunities to reach new audience segments and to monetise content in new ways to pay for the business.

For many years music companies stood against the tide and tried to ignore, then shut down, interactive web competitors. Eventually they realised that their old business model was not responsive enough to the digital age and that trying to stand against the tide was not working for them. Once that realisation hit, the music companies tried to catch up with new technology, with mixed success. In the same way, radio businesses which try to stand against the tide and stick only to their traditional media business will find themselves left behind by competitors and outmatched by new players who have thought of new and cheaper ways to capture an audience. While it is not pleasant to see new technology cutting away at your traditional business model, radio companies and employees who embrace the changes will be the ones that survive into the future.

Note: The Pandora website is now restricted to users in America for copyright reasons, but it was originally free and has had an enormous effect on world trends.

USEFUL WEBSITES

<www.last.fm>
<www.netia.net/us>
<www.pandora.com>
<www.radioinfo.com.au/news_item.php?id=9102>

4. THE STUDIO

Steve Ahern
and Rod Pascoe

The on-air studio and the production studio are the facilities which house all the equipment for radio production and broadcasting. A studio is built for the purpose of sending sound from a source to a destination. In a studio there is an audio mixing desk and a number of sound sources such as compact discs (CDs), computer-based audio playout systems, minidiscs, MP3 players, turntables and microphones (mics).

Sound comes as an audio signal in digital or analog form from these sound sources, created by releasing the original sound energy stored in either digital bits and bytes or in magnetic form for replay. A mic converts voice into electrical signals by changing sound into electrical energy by means of a moving diaphragm.

The electrical signals that come from these sound sources are monitored, balanced, effected and coordinated at the audio mixing console and then routed to a desired destination. The destination may be the transmitter for broadcast, a recorder for in-studio editing, the studio speakers, headphones, or another studio.

Most radio stations have more than one studio. One of these is the on-air studio, used for live daily broadcasting, while others may be used for voice-tracking, networking or for pre-producing programs and segments for later broadcast. Production studios have a different function from on-air studios. For example, they may be used for recording voice-overs, news and telephone interviews or for the production of ads and station promos.

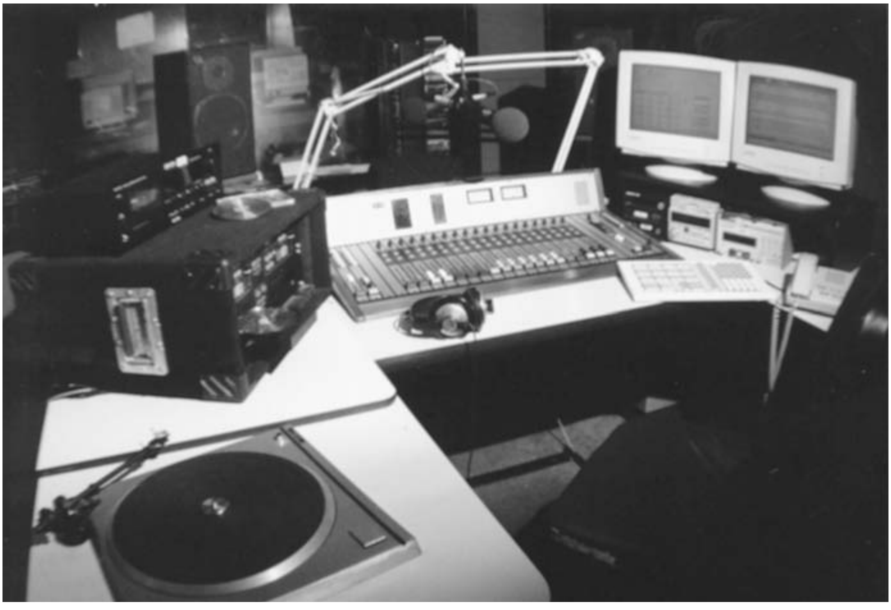
THE ON-AIR STUDIO

Most consoles in on-air studios are either U-shaped or L-shaped, with many variations to layout and desk height. Equipment is ideally located within arm's reach and is usually arranged on the console in an order similar to the placement of each machine around the desk.

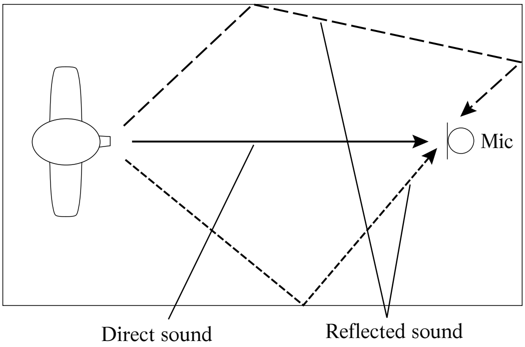
For ease of operation and maximum efficiency remote controls usually trigger the operation of equipment, and chairs are on wheels and have adjustable height settings to achieve optimum reach. Some studios are constructed so that the announcer can stand up.

Acoustics

Studios are designed to achieve the best acoustic specifications for their purpose within the available budget. Acoustics is a mathematical science, but it can be simply described: it involves achieving the correct balance between direct and reflected sound.



Analog radio studio in U-shaped layout



Direct and reflected sounds are captured by the microphones

The materials making up the studio walls, equipment and windows in a studio either reflect or absorb sound. A 'live' studio has more reflected sound, or reverberation, than a 'dead' studio, and sounds bright and often harsh in comparison.

Generally speaking, production studios tend to have minimal reflected sound while broadcast studios are usually a little more 'live'. That is not to say that the room should be completely dead—a small amount of reflection gives a 'human' quality to the sound.

Parallel walls create a lot of reflection and are generally avoided in studio construction. Acoustic materials are used to absorb reflected sound, including heavy soundproofed doors and slanted, double-glazed windows, usually with an air gap in between, used to avoid the intrusion of exterior sound.

Comfort

Studio aesthetics are another consideration in designing an environment to be used by one person, often for many hours at a time. Sensible lighting, efficient and ergonomic layout, the prevention of static electricity and a safe environment are all factors contributing to a comfortable, and therefore productive, work space.

Static electricity can trigger auto starts and turn faders on and off unexpectedly, especially on windy days, so minimise it by using an anti-static spray or a static touch pad which grounds the electrical spark harmlessly.

Studio etiquette

When in the studio ensure that you follow station rules such as not bringing food into the studio and cleaning up after yourself. It is common for announcers to want to sip a little water during a broadcast;

if this is allowed in your station ensure that you store the water in a spill-proof bottle placed on the floor to avoid spills into the panel.

If the on-air light is on do not enter the studio, and if you are interrupting someone else's shift at any time ask their permission. When finished, clean your studio and 'zero the desk' by placing all faders, except the one which is live to air, in the 'off' position.

THE ON-AIR CONSOLE

The coordination centre of the on-air studio is the audio console, referred to also as the desk, board, control panel, or mixer. Every piece of equipment is connected to it, including recorders, CDs, playout computers, turntables, mics and other equipment, allowing control over the whole program.

The console exists to simplify your work in the studio. It is also possible to operate a studio without a console using computer automation equipment. An automated studio computer system can simulate all the functions of a console internally if required, but most professional radio stations use a console in conjunction with computer playout and automation systems.

Consoles can be analog or digital. In a digital studio the mixer board is really the control surface of a computer server which does the switching and adjusting. In an analog desk the switching and level adjustments are performed within the circuitry of the desk itself.

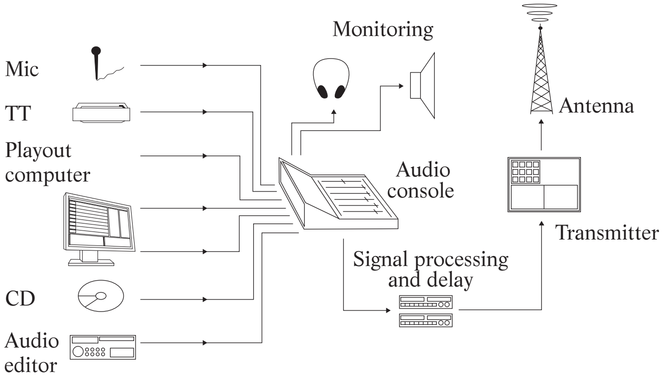
You will encounter as many different consoles as there are brands. Happily, all consoles have basic similarities, and proficiency in operating one provides you with the essential knowledge to operate any console.

L-shaped digital studio

Basic console functions

The console controls the audio signals from all the sources in the studio. It has three main functions:

1. It allows the operator to select a ‘signal’ or combination of signals to input into the console from the array of sound sources available, such as CDs, recorders and mics.
2. It allows the operator to amplify these incoming signals to an appropriate volume or level.
3. It allows the operator to direct these signals to any number of outputs, such as to a recorder, to a transmitter for broadcast, or to studio speakers.



Signal path diagram from studio to transmitter

Try to imagine the path of the sound as it passes from the source device through the panel’s input level controls, then to the desk’s output amplifiers, processing, and finally moving to the transmitter and/or audio streaming. An understanding of the technical sequence from the studio to the listener will result in improved panel operating and troubleshooting skills. The sections below explain the panel functions in more detail, while the transmission process is discussed further in Chapter 19.

Input selection and level control

Each piece of equipment is assigned to a fader on the console. Fader assignment may be set permanently or may be configurable via manual settings or memory recall. Faders are sometimes also called sliders, volume controls, pots or gain controls.

The fader gives you control of the level, or volume, of the sound arriving from each piece of equipment. The linear fader provides a quick visual representation of which inputs are in use, and at what level. While faders on digital consoles behave in the same way as those on analog panels, they are really remote controls for the computer server, which actually does all the level adjustments and switching internally.

The number of faders on any console depends upon the number of sound sources and fader modules available in the desk. As well as CDs, recorders and playout computers, there could also be guest mics, telephones, and lines incoming from other studios or outside sources.

Digital consoles use sub-menus to assign sources, so check that you know how to access the sub-menu functions in case you ever need to reset the desk. Digital assignment sub-menus can be accessed through the digital desk's control screen and can also allow adjustment of pre-amp gain, phantom power and equalisation for each fader.

Faders on digital console

Outputs from the console

The output from the console sends the operator's chosen combination of audio signals, that is, the program, to its selected destination. The choice of possible destinations varies from console to console, depending on the number of outputs available. In some cases, a console does not have a variable selection of outputs if it is only intended for the signal to go to air.

The most common output selections on a console are two push buttons usually located at the top of each fader or, in older consoles, on a three-way toggle switch. These will usually be labelled 'program/audition', 'on air/record' or 'channel 1/channel 2'.

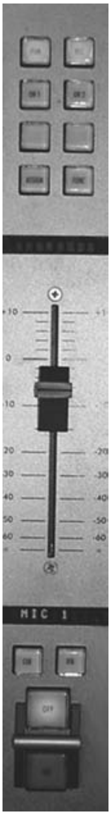
In the 'off' position, the output is stopped and no signal passes. Nothing is heard at the monitors and no signal shows on the console meters. In the 'program/on-air/channel 1' position, the signal goes to the transmitter for broadcast and to other transmission sources such as an internet streaming processor.

If the studio is a production studio, this signal may also go to a recorder for prerecording. In the 'audition/record/channel 2' position, the signal goes to recorders and monitor speakers but not to the transmitter.

The purpose of the 'audition/record/channel 2' position is to allow recording and to audition the sound quality and level of a signal without it going to air. On some simpler consoles the output switches may not offer an 'audition/record/channel 2' option; they may only offer a program and cue position.

On digital desks each fader is separately switchable to any output via the control menu, allowing a greater level of flexibility for prerecording or complex outside broadcasts, but also creating the potential for signals to be routed to the wrong output if settings are wrong.

As a safety measure against accidentally putting a studio to air there is usually another switch on the console to engage the on-air feed.



Output selectors and assignment buttons at top of fader

Cue

In the cue position, the audio signal is sent to a cue speaker located within the console itself, or a small speaker attached close to it. The speaker is smaller than the studio speakers because audio quality is less important when cueing.

As the name implies, the cue position is to preview and cue up a sound source. For example, a track can be cued to the exact position for the sound to begin immediately when the player is started, or the beginning of an audio grab can be found and readied for replay. Digital playout systems and CDs have less need of being cued because, if set correctly, they usually cue themselves to the starting point of the item, but the cue speaker allows checking and previewing for content and level.

The cue channel is also important for listening off air to the style and mood of the music before it is played, so that you can adapt your delivery to match that style and mood.

The cue signal does not usually go to the transmitter or to any recorder, only to the cue speaker and/or your headphones. The cue position can be found as a click-down function below the 'off' position of the fader, as a separate cue button on the fader channel, or as a switch on some 'pot' desks.

If the cue position is found below the 'off' position, pulling the fader below the 'off' position clicks the fader into cue. Releasing the fader back to the 'off' position clicks the fader out of cue. Ensure that you know how to properly engage and turn off the cue functions on your desk because accidentally keeping a fader in cue mode while talking can cause other devices to cue into your headphones or cause other unexpected sounds to occur.

Starting the player under your last words in a break hides any equipment or panel noises, ensuring a tight, smooth program. Once the music is playing, ensure your mix of music and voice levels are right and that your delivery is in keeping with the music that you are talking over.

Monitoring

With either 'program/on-air/channel 1' or 'audition/record/channel 2' outputs selected, the audio signal can be heard on the studio speakers or monitors. The console has a volume control to adjust the loudness of the monitors for your listening comfort in the studio environment. This control does not affect the volume of the sound being sent to the listeners or to the recorders.

It is possible for beginners in a studio to be fooled into believing that because they are getting a decent level through the studio monitors, the signal going to air is correct. In reality, this may not be the case. You need to adjust your monitor levels after checking that the input and output levels of the sound source are correct for broadcast. (See 'Setting levels and metering' later in this chapter.)

The volume control for the monitors is usually located to one side of the console. The control may also have push buttons to select which output you are listening to. You can monitor many different signals. For example:

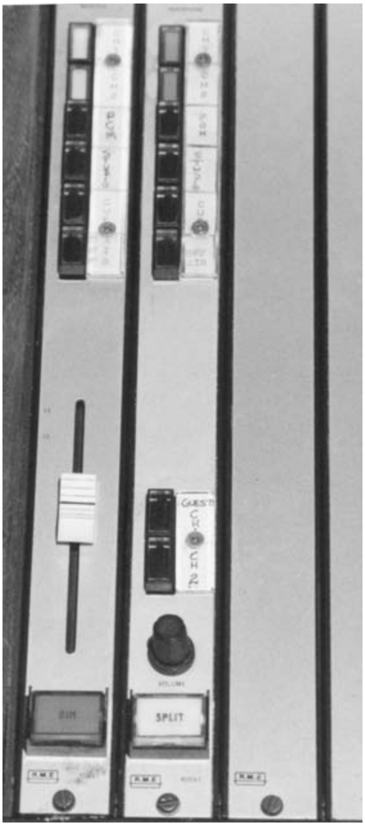
- channel 1—the on-air send;
- channel 2—the send to the recorders;
- delay—the signal leaving the program delay unit, if used;
- program—the live program going to air, usually fed directly from a receiver tuned to the station or from the last available undelayed point in the transmission chain;
- cue—on some consoles you can listen to the cue send at the main monitors; and
- jack, patch or auxiliary—other output options made available at the jackfield, or patch bay, or the auxiliary sends relevant to your console.

There is also a monitor 'dim' button (also sometimes called the 'mute' button) included on most consoles to reduce the volume of the speakers temporarily and then return to a previously adjusted monitor setting, so that you can cue or prepare without the distraction of the main program.

It is always important to maintain a constant monitor level throughout a program, so that your ears become accustomed to a reference sound level. This helps you to maintain a good balanced loudness in broadcast and record levels throughout the program.

When you are live to air you should normally monitor the live program feed (often referred to as the 'on-air' feed) unless there is a special reason not to, for instance, during a talkback segment that would be in delay. You should hear your program as your listeners hear it, so that you can judge how it is sounding from a listener's point of view.

Broadcasting to digital radio or internet streaming requires digital processing at the point of transmission, which fractionally delays the signal, making it technically impossible to monitor the live program feed. So in digital radio broadcasting a post-studio preprocessed monitoring feed is used for monitoring and program fail alarms assume more importance to alert staff to transmitter failures.



Monitor (fader) and headphone (pot) volume controls with push button output selectors

Master volume controls

On some consoles there are one or two master level faders controlling the final amount of mixed signal going to air. In most cases these masters are pre-set and should not normally need adjustment unless there is a significant level problem that requires correction. If any of these master faders are in the 'off' position, no sound leaves the console through any output and no signal is heard at the speakers. Fortunately, most broadcast consoles spare you the added complication of these extra faders.

Remote starts, clocks and timers

Remote start switches are usually located on the same on-switch that opens the channel. When there is a remote switch, sometimes called a GPI (general purpose interface) on a digital desk, opening the channel usually also starts the machine. This makes it easier to start a machine without having to turn away from the mic. Not all consoles have remote starts: always check.

Many consoles also have in-built timers or clocks. These are important tools for timing both live material and prerecorded programs. Playout systems generally have a large, and often coloured, countdown timer which shows the remaining duration of the item playing. CD players and other inputs also have counters, which are important tools for keeping track of where you are up to as you move through your program.

STATION OUTPUT

Once the signal leaves the panel's main program master amplifier it travels by a broadband network or studio transmitter links (STLs) to the transmitter site where it is processed and broadcast.

Radio stations currently broadcast on the AM and FM bands, on digital radio (DAB+) and on the internet. AM, FM and digital transmission have different characteristics. Some of the main differences are:

- AM's transmission quality is inferior to FM's because it cannot transmit higher and lower frequencies as well as FM.
- AM's coverage area is greater than FM's, given equal transmission parameters.
- AM transmitters are more expensive to run than FM's.
- AM is subject to electrical interference whereas FM is not.
- FM is subject to multipath distortion whereas AM is not.
- To achieve the same amount of coverage as AM or FM, most digital radio formats require more transmitters.
- Unlike AM and FM, digital radio can broadcast on the same frequency from various transmitters at the one time without interference. This is known as a 'single frequency network'.
- Digital radio and the internet transmit sound using a computerised bit stream, which allows the inclusion of pictures, text and metadata, giving more consumer options than AM and FM. Digital radio is free to air, while with internet streaming there is limited bandwidth and a cost for bandwidth consumption.
- Digital radio is transmitted at high power on the 9A television channel, known as VHF Band III, in capital cities, with some low power L-band in-fill transmitters used to cover transmission black spots (see Chapter 2 for more on digital radio).

The technical details of station transmission outputs are discussed further in Chapter 19.

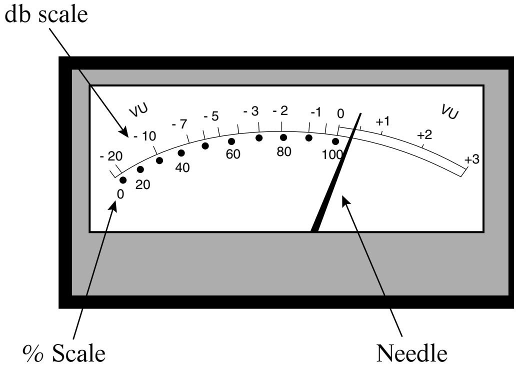
Setting levels and metering

To send the correct amount of signal to air, or to record, you need to be able to read a VU (volume unit) meter or a peak meter and to set a level. The 'correct amount' is anywhere between –5 to +1 decibels on the VU meter.

The VU meter reads the average level of the loudness of the total program. The meter is designed to correspond with the listener's impression of loudness. This makes it a valuable tool for monitoring the overall output of a program and for maintaining a steady average program level.

In reality, a program will contain many peaks in level which go unnoticed by your ear and the slow-moving VU meter, but not by media such as digital recorders, magnetic tape and amplifiers. These instantaneous bursts of high energy or transient signals can cause distortion in amplifiers, in digital recorders and on tape, so you need to gain some idea of your program's overall peak performance when recording material.

To avoid distortion, many studios are equipped with peak program meters, or PPMs, that are fast enough to capture a reading of these peaks while holding them for a second for you to read before they disappear. Rather than volume units, PPMs are read in decibels.



VU meter

VU meter

VU meters usually consist of a needle moving on a graduated scale or a set of light emitting diodes (LEDs) in green and red. Peak program meters are rows of LEDs and can come in various colour codes, including green, yellow and red. Setting the level of a program, whether it is a piece of music, a caller on the telephone or your own voice, requires the same procedure.

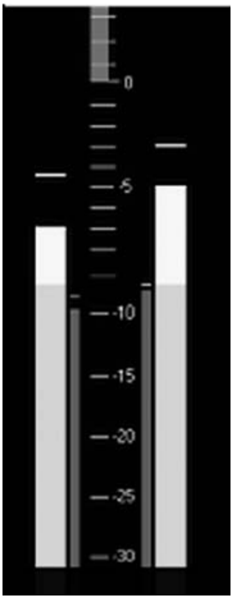
Generally speaking, the signal should be controlled so that it averages between about 80 to 100 per cent on the VU meter. Eighty per cent is shown as –2 on most meters and one hundred per cent is 0 VU, above which you will notice the meter is coloured red. On the LED meters the colour of the light changes to red at this point also. It is acceptable to allow the occasional peak into the red section of the scale, but that red portion is there to indicate when your signal could become distorted.

After setting the level for your program material and adjusting your monitor, your ears should tell you when the program is getting too 'hot' (high in level) or too low. With experience you will be able to judge this automatically without having to watch the meter.

Be aware, when setting levels, that VU meters tend to respond more energetically to bass frequencies because bass sounds have more energy. Conversely, you may be getting low-level readings for high-frequency material. If the material sounds loud enough compared to the general loudness of your program but the meter reading is low, you may have to trust your ears.

If the program levels were originally set correctly and your monitoring has been properly adjusted, what you hear is what the listeners hear. In that case, if the higher frequencies sound too soft they need to be adjusted.

When recording to analog formats there is less room for error with levels because sound recorded too softly will be subject to interference noise from the recording medium (known as 'signal-to-noise ratio'), and sound recorded too loudly will cause distortion. When recording to digital media such as CDs, minidiscs or hard disks, there is more 'head room' and less background noise, allowing for greater variation between soft and loud levels before 'noise' or distortion. Distortion in digital recording media usually sounds like an electronic 'splat' (like a brief click or distortion of a whole section of a recording) in the program, and can be corrected by bringing the recording levels back into the acceptable parameters.



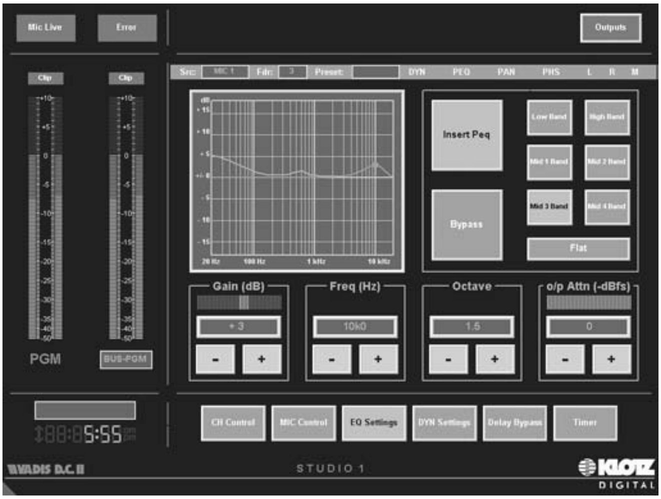
Peak program VU meter

EQ and pan pots

Many desks have simple equalisation controls or EQ. These are tools which allow certain frequencies of a signal to be boosted, or attenuated, and can be used to remove unwanted sound from a recording. Digital desks usually have EQ options in sub-menus behind the main status screen.

On-air consoles do not require sophisticated equalisation, but many production studios do (see 'The production studio' section later in this chapter). Experience and experimentation will teach you to use equalisation to your advantage, but an important thing to remember with EQ is 'less is more'. Too much EQ can spoil a production in more ways than it can fix it.

On stereo consoles panoramic or 'pan' pots control the balance of the program between the left and right output channels. These can be used for effect, such as to introduce 'separation' between an interviewer and interviewee, or to simulate the effect of sounds moving from one side of the room to the other.



Src: MIC 1
Fdr: 3
Preset:
Gain (dB) +3
Freq (Hz) 10k0
Octave 1.5
o/p Attn (-dBfs) 0

Klotz desk screen showing active equalisation settings

As with all special effects, experiment and listen carefully because to create too much space in an interview would be to create an unrealistic listening situation.

Tone generators

Tone generators emit a constant tone of a particular frequency, either 700 Hz or 1 kHz. The tone is used as a reference point for the loudness of a prerecorded program and to align the input and output levels on the desk.

Some on-air desks have tone generators, but they are more often found in production desks.

Headphones

All audio consoles have provision for listening to the output of the program through headphones. This is because the speakers must be muted when a live mic is opened. Always wear your headphones when the microphone is switched on.

The speakers need to be muted to avoid feedback, caused when the signal you have created by talking into the mic comes out of the speakers and is reheard by the mic, and so on into infinity. It all happens rapidly and sounds like an earsplitting screech. You achieve the same howling feedback effect if you inadvertently let your open headphones get too close to an open mic. Your headphones, after all, are just another set of speakers. You should avoid this happening if

Rhode microphone (front left) with RCS playout system and Klotz desk

you value your hearing! To avoid speaker feedback but still get an idea of what your voice is sounding like through the open mic, and how it balances with the rest of the program, you need to monitor through the headphones.

A separate headphones selector and volume control will usually be located near the studio monitor selections. Always look for labelling on faders and volume pots, so that you can more quickly familiarise yourself with a new panel.

If you are broadcasting live to air you should usually set your headphones to monitor the on-air program, unless you are in delay or broadcasting on digital radio or the internet. If broadcasting on digital radio or streaming, monitor the program channel or select the preset digital output monitoring position. When recording, monitor the channel that you are working on.

MICROPHONES

The microphone (mic) is the live element of the radio studio. CDs and digital recorders play rehearsed, timed, edited and enhanced prerecorded material but the microphone is the direct, natural and spontaneous interface between the announcer and the audience.

There is no ‘correct’ mic for radio use, although some announcers and engineers may have a particular favourite.

Microphones are transducers; in other words, they are devices which convert one form of energy to another. Microphones convert minute changes of air pressure or soundwaves into minute amounts of electrical energy or audio signals. Microphones come in all makes, shapes and sizes but all have a diaphragm which moves in sympathy with changes in air pressure.

Polar response

One of the important considerations when choosing a microphone is its polar response or pick-up pattern. There are a number of patterns to suit various applications. For live radio use the common polar patterns are omnidirectional and directional. As the name implies, omnidirectional mics pick up sound from all directions. This is handy in a situation where a group of studio guests are sharing one mic around a table, for example.

A particular type of directional mic called 'cardioid' is the most common microphone pattern found in radio stations. Cardioid mics are given that name because of their heart-shaped polar pick-up pattern. They pick up sound well from the front and less from the sides and hardly at all from the back. Cardioid mics are therefore useful for reducing noise from paper movement and button pressing on the console, which normally happens behind the mic.

Dynamic and condenser microphones

'Dynamic' microphones have a sturdy design and do not require power, so are favoured for field recordings and in many studios where a power source is not available. Dynamic mics are sturdy, but may not produce frequency responses which sound as good as a powered mic.

Powered microphones, called 'condenser' mics, give a better frequency response and are commonly used in production studios because of their better quality. Because the condenser mic is more sensitive it may distort more easily when used by announcers with poor mic technique. There is also the possibility of electronic noise with condenser mics if studio wiring is badly balanced or run over too great a distance. And, of course, if the microphone's battery is dead or the desk is not able to supply 'phantom power' back to the mic through its cable, then there will be no sound from the microphone at all.

Mic technique

When using a mic, consider its position and your distance from it. Your mouth should be between 10 and 20 centimetres from the mic, depending on the strength of your voice. Position the mic so that you are not talking directly into it to avoid popping and lipsmacking noises from your mouth. Either put the mic above your mouth with the front pointing down, below and pointed up or slightly to one side pointing in towards your mouth. One advantage of the above-pointing-down and the side positions is that you have an unobstructed view of the console and scripts etc.

Always experiment to find the best microphone position for yourself. Do not just accept the standard position in which you find the microphone without assessing it in relation to your own voice and style.

Feedback

Feedback—that squealing sound that is annoying to listeners and damaging to your ears—is caused by the microphone 'hearing itself', usually through your headphones or a speaker nearby that is not muted. To eliminate feedback, move your headphones away from the mic or turn them down.

Proximity effect

The proximity effect is the increase in bass response of a cardioid mic as you get closer to it. It is particularly noticeable when your mouth gets to within a couple of centimetres of the mic. It can flatter a thin high voice and some announcers use proximity effect to give their voice a deeper sexy tone. But proximity effect can also be detrimental to other voices and may increase the amount of popping and lipsmacking and may make you sound muffled. Omnidirectional mics do not experience proximity effect.

Pop filters and mountings

When you work close to the microphone there is a risk of breath puffs, particularly from explosive consonants (p, b and t) which can produce high velocity air that hits the diaphragm, resulting in a very loud thump or popping sound. By placing a foam pop filter or windshield over the mic, most of the high velocity wind is absorbed and does not reach the diaphragm.

Some mics have close-talking shields built into their construction, usually made of layers of fine mesh. Use pop filters in conjunction with good mic position to achieve the least amount of popping.

A shock mount is an elastic cradle or suspension which isolates the microphone from the arm and table to which it is mounted. It is used to reduce the amount of mechanical noise transmitted to the microphone.

When an unprotected mic or mic stand is bumped, it generates a loud thumping sound. Even bumping the console or table can be heard as a loud thump at the mic. A shock mount can reduce or eliminate this problem.

Some microphones are fitted with a high-pass filter or bass cut switch. High-pass filters allow you to reduce the low frequency response of the mic. Bass cut can help reduce the effects of proximity, pops and bumps as the sounds they generate are all at the lower end of the sound spectrum. Care must be exercised when applying bass cut or filtering so as not to destroy the quality of the voice. Normally the bass filtering occurs below 100 Hz.

Sennheiser cardioid mic with foam pop filter

STUDIO EQUIPMENT

Telephones

In your studio there will probably be one or two telephones, perhaps with several lines. One telephone will be a private line, the other the studio telephone that can take in several calls at once and bank them up for broadcast.

A telephone line which normally has a bandwidth of only 3 kHz sounds quite thin, but it is an important connection to the listeners. You will be able to lift the handset and talk to a caller, put them on hold and allow them to listen to the on-air program down the telephone line until it is their turn. It is good practice to go back to listeners to let them know they will be coming up soon if they have been waiting a while.

The telephone hybrid that brings the caller's voice into the panel and sends your voice down the phone line will usually reduce the level of the caller as you speak (often called 'ducking') using a variable 'ducker' setting. This prevents feedback in the telephone, but can sometimes be annoying to listeners if you make it duck too often. For instance, if you try to encourage a caller by saying 'yes', 'right', or 'uh-huh', you will find that what the listeners hear is you talking over the caller, throwing their level down.

A properly adjusted telephone air system should have ducking that is not too severe and should also be connected to the delay system's 'dump' button, so that if a caller is dumped they are disconnected from the telephone line.

Putting a phone call to air on the panel is just like any other function. Switch on the channel and turn up the volume. Make sure that any special channel or delay buttons are configured to allow the telephone signal to get on air. On digital desks there may be a memory setting which does all this.

The telephone system can bring the outside world into your studio and can add a real sense of access if used properly.

Delay units

In the on-air studio there is often a delay unit that can delay the program by a variable amount of time, usually about seven seconds, so that the presenter or producer can dump offensive or defamatory material before it would have been heard by listeners.

The delay unit works like this. In a digital delay system fractional moments of sound are cut from the overall output to 'catch up' to the preset delay time. When the machine has stored about seven seconds of program time it uses that time to hold the program electronically inside it, then releases that sound in a continuous flow to the listeners.

Connected to the delay unit are remote 'on' and 'off' switches that can be operated from the announcer's console, and usually also from the producer's. A third remote button called 'dump' is also on the console. When a person says something offensive or defamatory to the announcer on talkback, for instance, the announcer can push the dump button and the offending seven seconds leading up to the moment the dump button was pushed are erased from the delay unit's memory and are never heard by listeners. When 'dump' is pushed the caller is usually automatically disconnected and the announcer goes back to live programming, ready to move on to the next program item.

In delay it is impossible to listen to your on-air feed in headphones because you will hear yourself back seven seconds later than you spoke. So, when using delay, you have to change your monitoring back to program/channel 1 and listen to the undelayed studio feed. When getting out of delay or during other normal programming you should listen to the 'on-air' feed as the listeners would hear you.

If broadcasting on digital radio the live-to-air signal is permanently in delay, but for a different reason—the digital codec takes time to process sound. In digital radio you can never listen live to the 'on-air' signal.

DIGITAL STUDIO EQUIPMENT

While there are still some studios with a mixture of digital and analog equipment, most studios have moved to an all-digital chain.

Digital equipment includes CD players, computer playout systems, hard disk recorders and external drives such as iPods and MP3 players. Older formats such as DAT and minidisc players are no longer in common use, but are still around in some studios.

Digital recording involves a process of converting audio information into an electrical signal composed of pulse codes which contain binary information. The sound waveform is sampled at rates of more than 44 000 times per second and that information is stored on media such as CDs, minidiscs or hard disks within the computer or portable USB drives.

The key differences between digital and analog equipment are that digital equipment is:

- non-linear;
- non-destructive;
- can be networked to other workstations; and
- can be pre-programmed.

Analog tape is linear—you have to start at one point and continue on a straight line until you reach the next point you want. In contrast, digital equipment is non-linear, that is, random access, so that you can play and record at different points by locating them on a screen or through an index, or access the same audio simultaneously from various workstations. The random access nature of digital recordings makes it easy to locate any parts of the recording and program the controlling computer-operating system to play those segments in any order.

Digital equipment is non-destructive. While working on a piece you can undo various actions to restore the piece back to an earlier stage and, if you need to, you can exit without saving and the original piece is preserved. Unlike analog recordings, digital recordings do not generally lose quality as a new generation dub is made.

One of the disadvantages of digital recording is that hard disks can fill up, causing system failures, and recordings can be 'lost' through inadequate labelling or poor file maintenance. Always label and save files well and have backups of your work.

You can perform the same basic functions on digital audio as you do in a word processing document—open, save, close, cut, paste, copy and so on.

Storage within a hard disk workspace depends on the size of the files you save—if they are in stereo they use more space, if in mono usually half as much. If they are full-frequency recordings they use more space but if they are compressed, that is, some of the frequencies taken out, they will use less. Good file storage and file management practices are essential to avoid deleting or moving audio that is still being used in a current project. Read more about digital editing in the 'Multitrack recording' section later in this chapter.

CD players

A laser beam is used to read the digitally stored information on a CD and to transform it into electrical impulses that can be heard as sound. Because the sound is stored on the CD in digital form the sound quality is high. There is no physical contact between the player and the disc, so CDs last longer than other forms of sound storage if handled properly.

The CD is a small plastic disc, one side of which contains encoded information about the sound. A thin aluminium reflective coating makes it possible for the laser light to read the encoded information on the disc, and a lacquer coating protects the disc. Computer burnt discs do not last as well as professionally pressed CDs because they use a different burning process.

Because there are so many audio formats, such as MP3, WAV, Windows Media, Real Media and so on, not all CD players will read all discs. Manufactured CDs show a file called 'CDA' when viewed on a computer. A CDA file is not an audio file; it is a data file that tells the CD player to play the hidden CD audio from the disc.

Compact discs can be damaged by improper handling. Greasy fingermarks, heat, dust and scratches result in the player not reading the disc properly. To clean a CD use a dry or damp cloth and wipe across at right angles. This is different to the way you would clean a record.

CD player

Playing and cueing CDs
The controls on the player are straightforward, but professional machines may have a few extra features for cueing than domestic CD players. Using programmable features, you can stop the CD player after each track or arrange, then play, tracks in any order. Timers on the player, especially countdown timers, help you to know how much music is left on a track.

To cue a CD, select the cue function on the panel and enter the relevant track number into the CD player. Listen on cue to determine that you have the correct track and to set the level, then pause and re-cue the track to the beginning. When you open the fader your CD is ready for an instant start if there is a remote switch attached to the fader. If there is no remote, then leave the fader open to eliminate too many actions and simply push 'play' on the CD player when you wish to begin.

Fade out when the track is finished to avoid unwanted track run-through or program the CD player for single play option, which will stop the CD when the track has finished.

Some professional CD players have a cue jogger wheel, allowing the operator to rock the sound back and forth on the CD like on a turntable. This can help you to find a particular position where you want to start. Keep it in 'pause' until it is needed. Variable speed is also an option on some machines.

Playout and automation systems

There are many playlist computer systems on the market that take the minute-by-minute operating requirements off the presenter and put them into a computer. Most systems give you a choice of operating modes such as manual, live assist, random play and full automation. These systems have several advantages for staff and management in a radio station.

Managers and program directors (PDs) like automated systems because they ensure greater compliance with the music. These systems can also provide playlist log reports, showing which songs were played and which songs were missed, where the presenter made talk breaks, and when the ads were played. (See further discussion of the role of the PD in Chapter 16.)

A system that talks to other computers within the station can allow many departments to do their jobs more effectively. The traffic department (which schedules advertisements) can feed in the commercial schedules that can trigger ads loaded in by the production department, and integrate them into a playlist formatted by the PD and programmed by the music director, making the information and material flow within a station smoother than with manual systems.

In the studio itself the presenter can benefit by having more time to prepare material or rehearse scripts while a music-sweep is playing. During a busy breakfast shift a playout system can prerecord incoming program feeds and pre-schedule later segments, freeing the presenter to take competition calls and to better interact with listeners.

With computerised playout and automation systems presenters can write and record copy while a shift is going to air, producers no longer have to waste time dubbing multiple copies of promos for each studio, and news journalists can play and edit the same piece of actuality as they need it and more easily prepare bulletins for multiple networks.

Using a system such as RCS Master Control® and Selector®, the typical activities could be:

- Music director runs the day's music logs in Selector®, and the system imports them to the studio Master Control® playout interface.
- Advertising traffic department runs the day's commercial schedules and exports them into the Master Control® system.
- The presenter checks the logs for the shift and prepares material about the music that will fit into the scheduled talk breaks.
- The presenter later goes into the studio and plays the scheduled songs and ads out of the Master Control® computer, according to

the scheduled format, integrating these with the prepared material and with other program segments.

- The presenter puts the system into 'live assist' and prerecords some voice-overs during the shift for the production department.
- The presenter can use songs that have been pre-programmed with notes about the artist within the program. Some songs have been pre-loaded with the details of a group's next concert, a fan site or official websites, so that the presenter can get up-to-date information about the artists.
- The production department opens the voice-over sound files which the presenter recorded in the studio during the shift and works on them to make the next day's ads and promos. They add pictures, text and metadata for digital radio screens.
- The station floater in another studio voice-tracks the overnight shift that will be played in automation mode after the evening presenter's shift finishes.

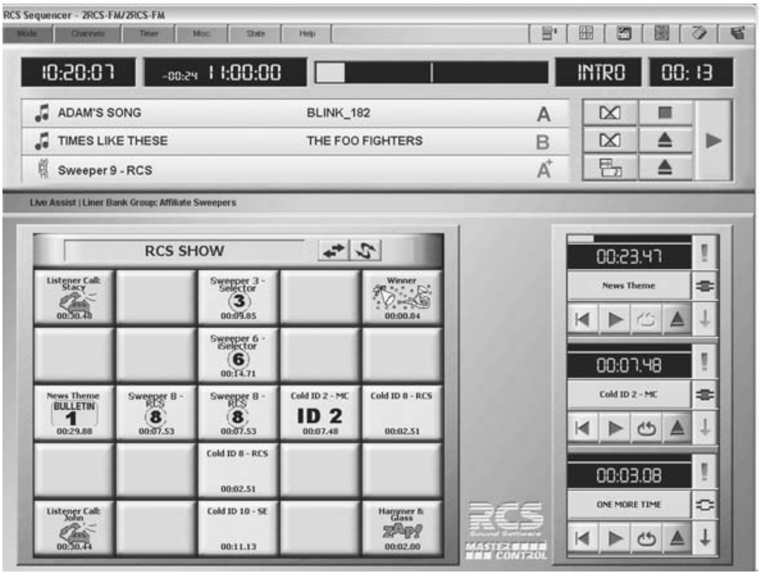
Many other systems such as Symian®, Dalet® and Zetta® work in a similar way to Master Control® and Selector®. Digital systems make a radio station more efficient. Used well, they give staff more time to do what is required and make control of audio and metadata outputs easier.

Playing and cueing

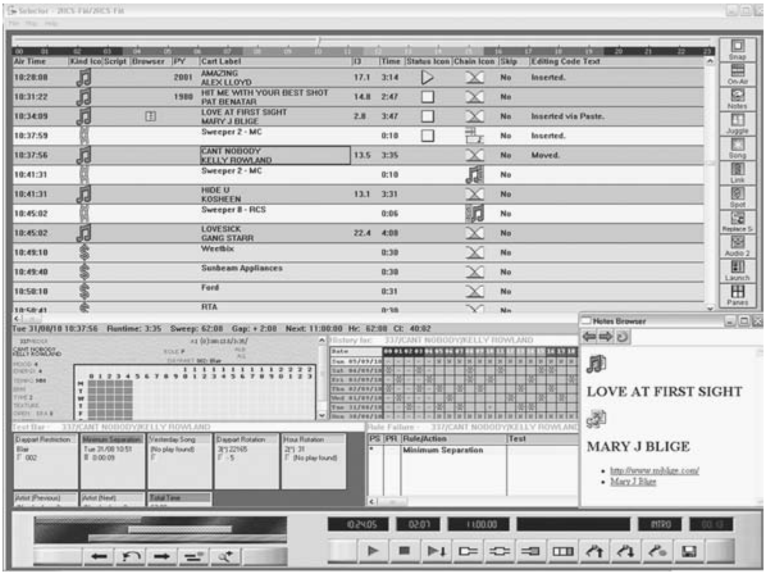
The advantage of a playout computer that already has all the content pre-loaded is that the operator can access the log at any point to check and reorder audio material quickly and efficiently. A playout system is usually made up of several programs that work together to store, order, sort and play the audio material. Key components of any system are a 'log' program and an 'audio player' program.

There are usually three modes in a playout system: 'manual', 'live assist' and 'automation'. A fourth mode, 'random', is also present in some systems. Working in a live-to-air mode will require you to be in either manual or live assist. When working in manual you will be required to press the 'play' key to trigger each item. When working in live assist mode you can preset items to trigger after each other automatically by setting automatic cross-fades on each item.

To play the 'next' scheduled item in manual mode, check that it has loaded into the player and simply click the 'play' icon. If the system has a special player keyboard hit the play button, or if the player is triggered from a keyboard hit the assigned play key (usually the space bar or a function key) or use a mouse.


RCS Sequencer - 2RCS-FM/2RCS-FM
Mode
Channels
Timer
Misc
State
Help
10:20:07
-00:24 11:00:00
INTRO
00:13
Live Assist | Liner Bank Group: Affiliate Sweepers
RCS SHOW
Listener Call: Stacy 00:30.48
Sweeper 3 - Selector 3 00:09.85
Winner 00:00.84
Sweeper 6 - iSelector 6 00:14.71
News Theme BULLETIN 1 00:29.88
Sweeper 8 - RCS 8 00:07.53
Sweeper 8 - RCS 8 00:07.53
Cold ID 2 - MC ID 2 00:07.48
Cold ID 8 - RCS 00:02.51
Cold ID 8 - RCS 00:02.51
Listener Call: John 00:30.44
Cold ID 10 - SE 00:11.13
Hammer & Glass ZAP! 00:02.00
RCS Sound Software
MASTER CONTROL
00:23.47
News Theme
00:07.48
Cold ID 2 - MC
00:03.08
ONE MORE TIME

ADAM'S SONG	BLINK_182	A
TIMES LIKE THESE	THE FOO FIGHTERS	B
Sweeper 9 - RCS		A+



Air Time	Kind Ico	Script	Browser	PY	Cart Label	I3	Time	Status Icon	Chain Icon	Skip	Editing Code Text
10:28:08				2001	AMAZING ALEX LLOYD	17.1	3:14	▷	☒	No	Inserted.
10:31:22				1980	HIT ME WITH YOUR BEST SHOT PAT BENATAR	14.8	2:47	☐	☒	No	
10:34:09					LOVE AT FIRST SIGHT MARY J BLIGE	2.8	3:47	☐	☒	No	Inserted via Paste.
10:37:59					Sweeper 2 - MC		0:10	☐		No	Inserted.
10:37:56					CANT NOBODY KELLY ROWLAND	13.5	3:35		☒	No	Moved.
10:41:31					Sweeper 2 - MC		0:10			No	
10:41:31					HIDE U KOSHEEN	13.1	3:31		☒	No	
10:45:02					Sweeper 8 - RCS		0:06			No	
10:45:02					LOVESICK GANG STARR	22.4	4:08		☒	No	
10:49:10	$				Weetbix		0:30		☒	No	
10:49:40	$				Sunbeam Appliances		0:30		☒	No	
10:50:10	$				Ford		0:31		☒	No	
10:50:41	$				RTA		0:30		☒	No	

Tue 31/08/10 10:37:56 Runtime: 3:35 Sweep: 62:08 Gap: + 2:08 Next: 11:00:00 Hr: 62:08 Cl: 40:02

History for: 337/CANT NOBODY/KELLY ROWLAND

Rule Failure - 337/CANT NOBODY/KELLY ROWLAND

PS	PR	Rule/Action	Test
*		Minimum Separation	

LOVE AT FIRST SIGHT

MARY J BLIGE

- http://www.mjblige.com/
- Mary J Blige

RCS Master Control® player (top) with hotkey bank, selector log (bottom) and cue windows

To play a different item from the ‘next’ scheduled item, choose the item you wish to play from a browse menu, then click and drag it into the player below the currently playing item. Alternatively, click on the item to highlight it and use ‘insert’ to move it into the player window. Once the item is placed, hit the play or next buttons or assign it to automatically cross-fade from the previously played item.

Cueing tracks in some computer playout systems can be tricky. High-end professional systems have several soundcards, allowing the operator to select a track and trigger it in a cue player separately from the main program player and soundcard. But in cheaper systems where only one soundcard is used or the desk has been wired through only one fader, it is more difficult to cue and preview items while the system is live to air because the cueing will be heard over the main program.

To cue or preview a track in a professional system such as RCS Master Control®, click on the track name to make it appear in the cue window at the bottom of the log screen. Choose to play the top or tail of the track by clicking on the ‘play beginning’ or ‘play end’ icons and open the fader to cue. To preview the whole track, select the ‘play all’ function.

Because tracks begin immediately when the button is pressed in a computer playout system, the need for cueing is minimised. The ability to assign most-used sound effects and audio items to ‘hotkey banks’ is another advantage of a computer system because it gives instant access to the many different types of audio a presenter may need to access without the need for selecting and cueing.

Voice-tracking

In most automated systems it is possible to voice-track a shift for later replay. Voice-tracking is a method of prerecording within the computer. The advantage of voice-tracking is that it takes only a short time and it does away with the need for staff to be in the station during their shift.

Voice-tracking works by integrating all aspects of the automation system together and playing them at a scheduled time. The music, ads and promos, the log and the presenter’s voice are all fed into the system from separate sources and merged within the system for replay as they are required.

RCS remote control panel

When you voice-track a shift you see the music, ads and promos displayed on a screen and there are unrecorded spaces marked where you are scheduled to insert your voice-tracks.

Using the cursor, highlight the blank voice-track that you want to record, opening it for editing, usually by pressing a 'record' icon on the screen or the keyboard. Listen to the end of the song which will precede your voice break as it fades down, and at the appropriate point record your voice segment then press the 'stop' icon on the screen or keyboard. Slip the voice-track to the best sounding position on the sequence and edit out unwanted content.

Recording a voice-track might go like this:

1. Move the cursor to the section marked '1.35 am voice-track' and click on it.
2. Press 'record' icon and be ready to begin talking.
3. Hear the last bars of the previous track in your headphones.
4. Choose an in-point and begin talking over the music.
5. You might say 'This is Oldies Radio with the best music of all time, including that one from Elton John. Before that Billy Joel with *Piano Man*, Alice Cooper, Killing Heidi and silverchair. This morning on Oldies Radio join Luke Starr at breakfast when he tries again to give away $10 000 in the secret sound competition . . .'.
6. Listen to the voice-track, decide whether you delivered it well and save it. In some systems you can also review the voice-track and change the position of it in relation to the music—if you talked over the first part of the vocals you can slip your voice-track back

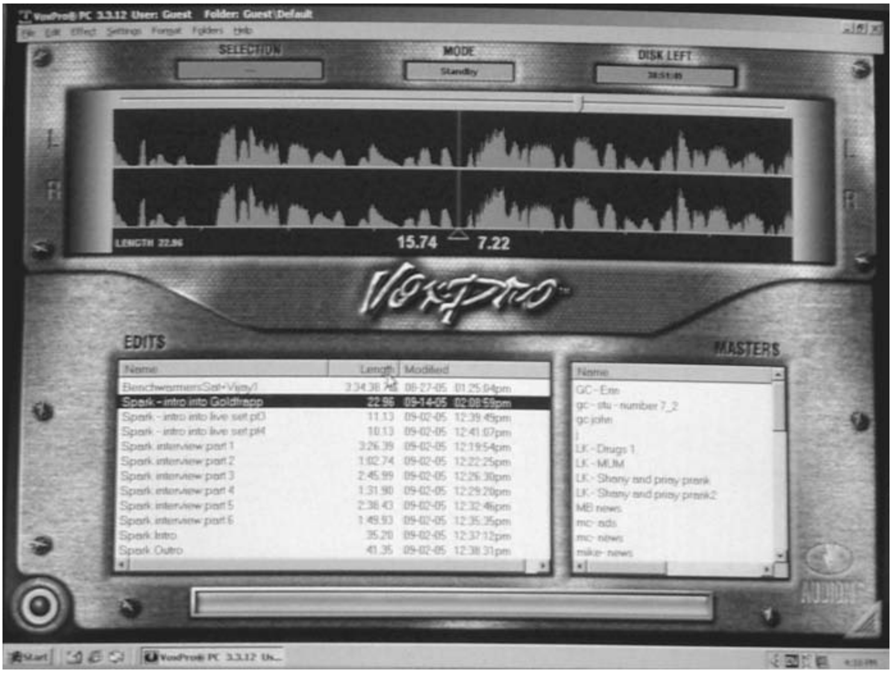
a little by dragging it on screen with the cursor and saving it in the new position.

7. When switched to automation mode after the last live shift is finished, the machine automatically locks each program component to its internal clock and replays them in sequence at the time required, so at about 1.35 am the next morning your voice-track is heard by listeners.

Digital single-track editors

In most studios there is a simple digital audio workstation for fast record and replay functions. Common single-track editors, often used for telephone prerecords, include Short Cuts, VoxPro and Adobe Audition among others.

Computer hard disk recorders store digital sound files on the computer hard drive or to an external disk drive or network hard drive. Sound moves in and out of the computer through soundcards which are configured to integrate with whatever sound format—digital or analog, balanced or unbalanced—is appropriate to the mixing console. The controls are simple and often there is an external control panel.



Name	Length	Modified
Benchwarmers(Sat+Vijay)	3:34:38.46	08-27-05 01:25:04pm
Spark - intro into Goldfrapp	22.96	09-14-05 02:08:59pm
Spark - intro into live set pt3	11.13	09-02-05 12:39:45pm
Spark - intro into live set pt4	10.13	09-02-05 12:41:07pm
Spark interview part 1	3:26.39	09-02-05 12:19:54pm
Spark interview part 2	1:02.74	09-02-05 12:22:25pm
Spark interview part 3	2:45.99	09-02-05 12:26:30pm
Spark interview part 4	1:31.90	09-02-05 12:29:20pm
Spark interview part 5	2:38.43	09-02-05 12:32:46pm
Spark interview part 6	1:49.93	09-02-05 12:35:35pm
Spark Intro	35.20	09-02-05 12:37:12pm
Spark Outro	41.35	09-02-05 12:38:31pm

Name
GC - Erin
gc - stu - number 7_2
gc john
j
UK - Drugs 1
UK - MUM
UK - Shany and prissy prank
UK - Shany and prissy prank2
MB news
mc- ads
mc- news
mike- news

VoxPro editing screen

Recording and editing

On-screen editing provides a visual waveform display which assists you in locating and selecting the segments you want to leave in or take out.

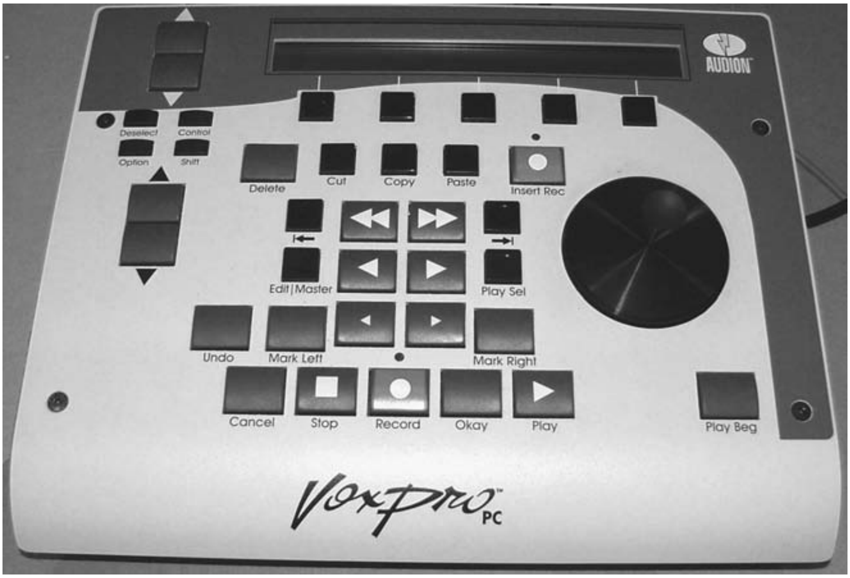
To record in an audio editor, create or open a sound file then engage the record function. Name the file and select the drive in which to save it, then decide on the audio file quality if the machine requires manual file setting. After that, input your sound. You now have the option of saving your file and working on it later, or editing it before you save it. Saving regularly is essential to avoid losing work in the event of a computer problem. Establish logical file management and name conventions for your audio files.

With an on-screen editor you can zoom in and out of the desired edit point to locate the right point of sound/silence where you want to make your cut. Mark the segment and use your keyboard to delete it, just like erasing text in a word processing document. Professional audio editing machines often use external keypads for more easy function access, while others require different combinations of function and shift keys to manipulate audio segments via the keyboard.

Setting levels

Ensure that input and output meters are in line with the desk and within the standard operating range (see ‘Setting levels and metering’ earlier in this chapter). You can see a visual indication of the levels on the screen but remember that the screen view can be zoomed, sometimes giving you a false impression of the loudness or softness of the item. A flat line usually indicates the level is too soft, while a waveform that almost completely fills the screen or is too square at the top is probably too loud and possibly distorted.

If prerecording a segment or phone call while you are live to air, ensure that only the channels you need are selected to the record channel (also known as ‘channel 2’ or ‘audition’), otherwise the on-air program will also be recorded. Also ensure that the channels you are recording are not going to the main on-air program or your listeners will hear the prerecording over the song that is playing.



VoxPro control panel

Portable audio storage

MP3 players, iPods, Flash Mics and digital dictaphones are all useful for digital field recordings. These machines do not have moving parts, with processing and audio storage performed direct to disk. When brought back to the studio they can be plugged into a recorder or direct to the desk or digital audio workstation via a USB port, or the file storage card can be put into a studio machine for replay.

Professional machines generally have the ability to record either high- or low-quality files at the flick of a switch on the machine. Non-professional machines such as MP3 players, dictaphones and iPods do not have a choice of file formats and usually record in low-quality compressed files. Wherever possible use the best quality file compression algorithm available, but if necessary best-quality MP3 files are usually acceptable for broadcast. Built-in microphones used in these devices are usually of low quality, so if possible use a better quality external mic for recordings which are intended for broadcast.

Logging recorders

Logging of all broadcast output is compulsory in Australia. A digital logging computer continuously records your station's broadcast signal to a central server, which can be accessed for airchecking or program replay by opening and replaying files indexed by day and time.

Minidiscs

Minidiscs, like CDs, store compressed digital sound files on discs that are read by laser beams. Minidiscs have a number of moving parts that make them more vulnerable to faults than hard disk recorders. They are designed as rerecordable media—you can use and reuse minidiscs to record long or short segments for instant replay.

A minidisc recorder creates a new track for each segment that you record onto the disc. There are small portable 'walkman'-type minidisc recorders that can be used for field recording and larger studio models that have more features for production and in-studio use.

The minidisc stores track information for the recording in its memory, writing it to the disc when 'stop' is pressed. During that few seconds after you press 'stop' you will usually see 'TOC' (table of contents) or 'TOC EDIT' appear on the display. This lets you know that the machine is writing the TOC file information for the segment that you have just recorded onto the disc to index it for later retrieval. If there is a problem writing the TOC to disc then it is possible to lose the segment you have just recorded, so treat the discs and the machines well and report any abnormalities quickly so that 'write errors' do not occur. You should not shake or jolt the machine when it is in TOC EDIT phase because this may cause it to fail.

Editing on minidisc

In playback you can select and program any sequence of tracks on the minidisc and play them back in whatever order you wish, either continuously or stopping at the end of each track. The minidisc will play each track immediately after the one before in continuous play mode.

When recording on a minidisc which already has material on it, always press the 'end search' button to ensure you make new tracks at the end of the previous ones rather than overwriting previous recordings.

Digital recorders allow more dynamic range than analog recorders because of the improved signal-to-noise ratio, but over-modulation caused by the signal being recorded too loudly still causes problems. If you overload a digital recorder such as a minidisc or hard disk recorder, you will hear an electronic 'splat' which can sound like a brief click or, in worse cases, can distort a whole section of a recording.

Digital audio tape (DAT) recorders

A DAT machine replays digitally recorded material and can also record digitally. Unlike the CD where the information is stored optically to be reproduced with laser light, the DAT stores information onto magnetic tape. DAT tape is thinner than the tape used in analog machines, but the materials used are the same. Other similarities DAT shares with analog machines are the transport system and the heads that read and write information from the tape. However, tape speed is much slower than with analog recording—about one inch per second (2.5 cm/s).

When recording items onto tape the program numbers are recorded to the tape as 'start IDs' at the points where you may wish to cue—such as the head of a piece of music. They are nine-second tones picked up by the machine as it winds quickly through the tape, and can be used to locate cue points in the tape. Because material is stored in linear form on the tape DATs do not have the same random access capacity as other digital recorders, but a two-hour tape can wind its full length in 40 seconds so the combination of cue tones and fast winding still makes DAT tapes more accessible than their analog equivalents.

EQUIPMENT: ANALOG SYSTEMS

Most analog record and playback equipment has now been superseded in broadcast and production studios, because recording in the digital mode is generally cheaper, easier and more permanent than recording to tape.

Turntables

Although records are now considered old technology, there are still turntables in some studios and they are also in use by dance music DJs. As storage media, records have proven to be very durable over time and the content on them is still considered valuable.

The basic parts of a broadcast-quality turntable are the platter—a heavy metal plate covered by felt or rubber; the tone arm; the cartridge and stylus; the speed selector switch; the 'on/off' switch; and, on some turntables, a pitch control. The speeds, measured in revolutions per minute (rpm), are: 33⅓ rpm, 45 rpm and 78 rpm.

The tone arm is very light and sensitive. Its weight on the record is called 'tracking force' and can be adjusted. The tone arm houses the cartridge and stylus by which the signal is picked up from the record. The cartridge receives the minute vibrations from the stylus and converts these variations into electrical energy. The tip of the stylus is a hard material, usually diamond.

Never touch the stylus—it is very easily damaged. If you have to clean it, do so with a soft brush suited to the purpose. Dust can wear out the stylus and can cause pops and scratches on the record. Always clean records with proper record cleaner to lower the extent of static electricity that attracts dust. Records should be cleaned in a circular motion, in line with the tracks. Never clean them as you would a CD, by wiping at right angles from the centre.

Cueing records

Select the cue position on the turntable fader. Place the stylus in the silence gap just before the track you want to play. As soon as you hear the start of the track, stop the turntable and spin it slowly backwards a quarter of a turn so that no 'wowing' is heard as the turntable comes up to its operating speed. Take the fader out of cue and open it, ready to go to air. When the time comes, start the turntable remotely from its start switch on the console, or manually if there is no remote start.

When the record ends and you back-announce it, or go to another record, always decrease the fader volume to zero or switch the fader off. This ensures your music does not run onto the next track.

Analog audio storage systems

The pre-digital recording process is known as 'analog'. As the name indicates, the signal stored on tape is analogous to the audio waveform in the form of electrical variations. Analog storage systems include reel-to-reel and cassette tape recorders.

Tape recorders rearrange particles of oxide on magnetic tape in order to store sound and they replay that sound by responding to the stored particle patterns on the tape they are playing. The rearranging of oxide particles is done by the record head.

When the tape recorder is in 'record' mode, the sound signal is delivered to the record head from the record amplifier and is converted from an electrical signal to a magnetic signal. This magnetic signal jumps the head gap and magnetises the metal oxide layer of the audio tape.

When the tape passes across the tape heads, oxide particles become aligned in particular patterns according to the variations in strength of the magnetic field occurring at the tape heads.

The erase head switches on during recording and produces a powerful magnetic field that randomises the particles, erasing any previously recorded audio signal and making the tape ready for the new recording.

In playback the electrical direction is reversed—the playback head picks up the magnetic field information from the audio tape and converts this into an electrical signal. This signal is then sent to the playback amplifier to be heard at the speakers as a reproduction of the original signal.

Analog tape head configuration

Professional-standard machines usually have three heads: to erase, to record and to play. The erase head always comes first. It erases old material from the tape. The record head records the new material. Finally there is a playback head that allows the new material to be monitored during recorder playback.

Another format of analog tape, the cassette player/recorder, usually has only two heads: the first one is to erase; the second combines both record and playback.

Single and multitrack reel-to-reel tape recorders are still used in some recording studios because musicians like their older 'warm' sound, but maintaining and editing on these analog machines is more difficult and time consuming than using multitrack digital equipment. Cassette recorders are now largely obsolete and have been replaced by the convenience of portable digital audio storage devices such as iPods and MP3 players.

Reel-to-reel tape recorders

Tape speeds

Most tape recorders can record at speeds from 3¾ IPS (inches per second) to 30 IPS. The commonest speeds are 3¾ IPS (9.5 cm), 7½ IPS (19 cm) and 15 IPS (38 cm). To say that a tape recorder is operating at 15 IPS means that 15 inches of tape go past the heads each second. Most radio work is done at 7½ IPS and 15 IPS.

Like digital recorders, the way the sound is stored makes a difference to the quality: the faster the tape goes past the head the better the recording, because a higher frequency response is gained and a better signal-to-noise ratio results. Also the more tape passing the heads the easier it is to edit. Most recordings at 3¾ IPS are not acceptable quality unless they are well-recorded voice recordings. For higher quality recordings always go for the higher speeds.

Threading the tape

Thread the tape recorder from left to right, threading the tape around the tension arm, across the heads, between the capstan and pinch rollers, and around the tension take-up arm onto the take-up spool. Now set the tape speed and spool size, wind forward about 30 seconds and reset the counter. Winding in on the tape avoids using the ‘tails’ of the tape that are usually creased or damaged.

Recording

When recording a track, first set its level at the console. Next go to the tape recorder buttons and select ‘source’ or ‘input’. There are two monitor buttons which allow you to choose between source, which is the audio signal coming into the recorder, and ‘tape’ or ‘sync’ output, the sound recorded and coming out of the recorder.

To start recording, hold the record button in and press ‘play’. While recording, make sure the tape fader is closed on the console—if it is open, you will discover feedback.

Playback

The monitor button on the recorder should be set to tape, and the appropriate tape fader opened on the console. Check the output levels from the tape recorder. These can be adjusted by the output volume control knobs. Likewise, match this level on the console.

Some recorders have a switch labelled ‘SRL’ (standard reference level). This is a preset output level that may save you adjusting the recorder levels.

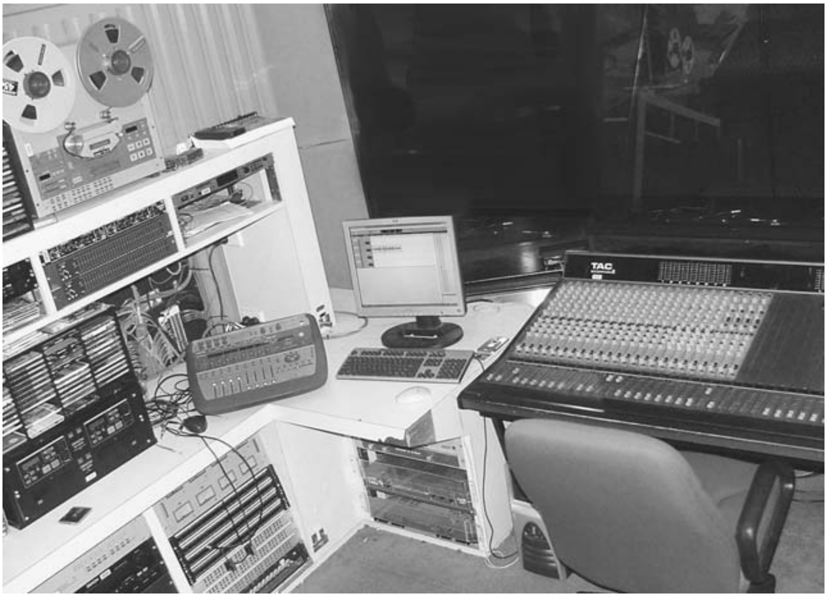
Cueing the tape recorder

Tape recorders can engage the tape with the heads while spooling, so it is possible to hear the sound at high speed as it passes. This can help you find material on a tape.

Editing

Tape editing can be achieved in one of two ways: by cutting the original tape, or by dubbing—or copying—from one machine to another. Cut editing, as the name suggests, requires unwanted sections to be physically cut out and the remaining sections spliced together again. Dub editing is useful to transfer material from formats that are difficult to edit, such as cassettes, or when large slabs of an interview need to be removed without much fine cosmetic editing.

Dub editing requires two tape recorders with fast pick-up speeds for clean editing without the first word wowing. The selected content is played from machine one and recorded onto machine two at the appropriate position.



Production studio showing analog desk (right), reel-to-reel tape recorder (top left), Protools digital audio workstation and digital console (centre) and patch racks (bottom left)

THE PRODUCTION STUDIO

The layout in production studios is more flexible than that of on-air studios. They may be U-shaped, or may be laid out to accommodate line of sight into voicebooths and studios with places for various people to sit.

A production studio will usually contain devices which are more complex or used at a higher level than those you are familiar with in the on-air studio. In a production studio you will find a range of machine formats so that dubbing can be achieved across many storage media. There will also be audio processing equipment that is not found in an on-air studio. The audio recorders are usually configured for multitracking and the production console is usually bigger with more functions than the on-air desk.

There are now many audio editing software programs available. At the professional end, Protools, Adobe Audition and Dalet are well-known brands in common use. At the non-professional home user end there are many free or low-cost programs available for download from the internet such as Audacity, Garage Band or DDClip. Protools examples are used in the following section, but the principles described apply to all audio editing programs.

To care for your audio computer ensure that you follow all the appropriate care procedures for a standard computer—do not spill drinks into the computer or the keyboard, clean both regularly, keep fan outlets clear and avoid extremes of temperature. As well as these standard procedures, ensure that you know the regular cleanup and backup procedures required for the operating system, and consider the use of an uninterruptible power supply.

Do you know:

- How much storage capacity can be used before you have to start deleting items to put new ones in?
- Does operating a number of functions at once slow down the system's processing ability?
- Do safety files such as TMP and CHK files need to be deleted manually if the system is shut down incorrectly?
- Does virus checking software or network connectivity slow down processing performance?

Always read the manual or help file to learn about your operating system and how to recognise and to carry out these and other basic maintenance functions.

The production console

The coordination centre of the production studio is the mixing console. Every piece of equipment you need is connected to it, giving you control of the recorders, CDs, computers, MP3 players, processors, turntables and mics, usually through a patch rack which allows you to configure the desk in different ways if needed.

It is also possible to operate a production studio without a console as many digital audio workstation systems (e.g. Protools) have editing and multitrack functions, plus simulated faders which can perform the same functions as a console, but most professional radio production stations use a console.

As with on-air consoles, you encounter as many different production consoles as there are brands and, in the same way, they have basic similarities so proficiency in operating one will provide you with the essential knowledge to operate any console.

Compared to an on-air studio console, the production console looks more complicated. It is. Each fader has an on/off switch and a volume control, similar to the on-air studio, but each also has additional functions. Cue is often called 'pre-fade listen' (PFL) on production desks and the on/off switch is often simply labelled 'stereo'.

'Auxiliary' sends give you the chance to route the signal from that fader to another location and are often used for foldback, allowing musicians to hear specific instruments or other elements of the mix.

Equalisers (EQ) are built in to each fader so that the high, middle and low frequencies on that particular fader channel can be adjusted. Use EQ to remove unwanted sound from a recording (such as traffic rumble from a street interview), or for enhancement or special effects. Equalisation is often a trade-off between eliminating a problem and still keeping a high quality audio signal, and it might not work in your favour in every case. Often a signal is better off going into a recorder 'flat', meaning it has no equalisation, because you may want to equalise it later in relation to the final mix rather than at the point of input.

Pan pots in each fader control the balance of the program between the left and right channels. As with pan pots in on-air consoles these can be used for effect, such as to introduce a little 'space' between speakers or to simulate movement from one side of a room to another.

At the top of each fader channel there are various selector buttons, so you can supply power to mics (called 'phantom power'), change the master gain level coming from a source to accommodate either mic or line levels, and perform various other switching functions. If there is no sound coming from the mic to your desk check that the mic/line switch is set to the mic input rather than line input. Another common trap is not sending phantom power to a powered mic, resulting in low level or no sound being heard through the fader.

Tone generators

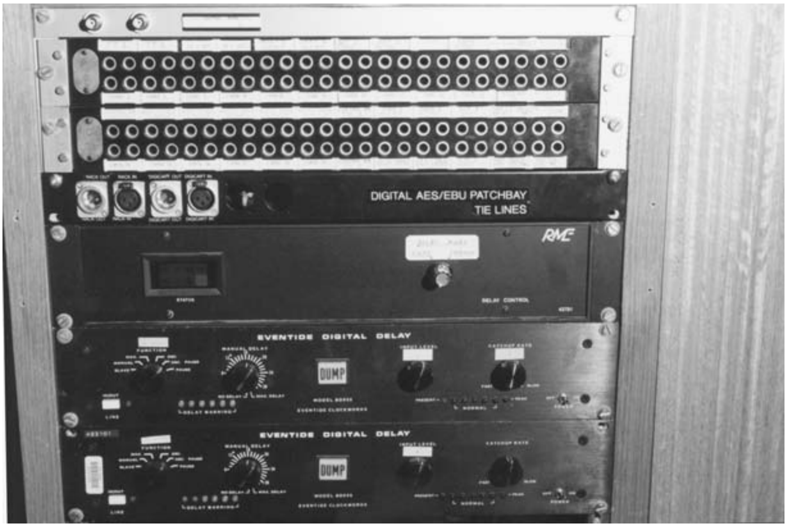
Tone generators emit a constant tone of a particular frequency. Tone generators can be built into the console or in the rack and may be activated by bringing them up through a fader or pressing a switch usually marked 'Tone'.

When recording material for a program, record a few seconds of tone before you begin adjusted to 100 per cent or 0 VU on the meter, in order to align your recorder levels with the desk. This is particularly important in analog tape recording because the tone ensures playback levels are the same as those set when the original recording was done. It can also be used to ensure all input and output levels are properly aligned before beginning to record.

The patch rack

Using the patch rack, you can get into and out of the desk without having to unhook leads from the back or get into the internal wiring.

Through the patch rack you can change the sources that you put into each fader. If you need more mics for one mix you can add extra mics through the patch rack or, if you need to bring in an extra recorder or audio source for a complicated mix, it can be added into the desk through an unused fader by using patch cords from the output of the machine into the fader input.



Patch rack and processing units in a production studio

Digital audio multitrack workstations

Digital audio recording takes place in the computer, allowing the sound to be stored and manipulated in digital form. Digital recording requires sound to go through four basic stages:

1. filtering, which strips out inaudible frequencies;
2. sampling, which converts the signal from analog to digital form;
3. quantising, which rounds values up or down to manageable parameters; and
4. coding, which assigns numerical values of zero and one to the project so it can be stored.

When you record an audio project in digital form you must tell the machine how you want it to perform these processes as you begin. You may be asked to set parameters such as ‘anti-aliasing’ (filtering), the ‘sample rate’ (sampling), or the ‘bit rate’ (quantising). The standard setting for sample rate is usually 48 and bit rate (or depth) is usually 16 for most professional radio broadcast recordings.

The larger the numbers are for sample and bit rates the better quality the file is, but make sure the recording settings you choose are compatible with other equipment in the station and will not create files that are so big they will fill up all your storage. In digital recording a full frequency 'uncompressed' sound file such as PCM, WAV or AIFF formats will deliver the best quality. Uncompressed files have better quality than compressed files, such as a WMA, MP3 or MP4.

Uncompressed files are larger, so they take up more disk space than MP3 files because all significant audible frequencies are present. For example, a 30-second audio file in PCM format will take up about 5.6 Mb of space in your hard disk.

PCM, WAV, AIFF and BWF files are usually used in production where high quality recording is required, and are mixed out of the machine for replay or archiving or burnt to disc or stored on an archive drive then erased to free up space on the production machine. While most digital multitrack recorders can work in a range of sample rates and bit depths, professional audio quality will be compromised with lower settings.

An audio producer must make decisions about what the file will be used for. If the file requires maximum quality, the bit rate and sample rate should be as high as possible (e.g. 32 bit, 48 kHz), but if space is scarce on the disk drive or the audio file is to be emailed then a lower quality may be necessary (e.g. 16 bit, 24 kHz). Bit rates lower than 16 and sample rates lower than 44.1 may be too low quality for many professional productions, but will produce adequate quality for non-broadcast uses such as emailing sounds or website audio. A bit rate of 16 and a sample rate of 44.1 in stereo is equivalent to a CD-quality recording.

Some systems use different terminology, such as 'low, medium or high quality', instead of bit and sample rates. When working in a professional production environment use the highest quality possible for the available storage space.

Digital radio has brought another level of complexity to audio production for radio. Audio files such as advertisements or station imaging now also have more complex metadata embedded in them such as name and title of the ad, client contact details and website address which may be displayed on the digital radio screen when the ad is played. Audio files for digital radio may also be linked to picture files for screen display. When creating and saving an audio file producers will often be required to fill in client metadata and attach picture files such as JPEG or PNG by using a wizard or dialog box to link the associated data with the audio file.

For digital radio, there are a number of minimum file standards required to ensure consistent good quality text and pictures are linked with the audio file properly at the time of playout. These standards are listed below.

Audio

- File format: 16 bit, 48 kHz, uncompressed PCM audio
- Header: EBU BWF (broadcast wave file) format
- Duration: within 1% of prescribed length

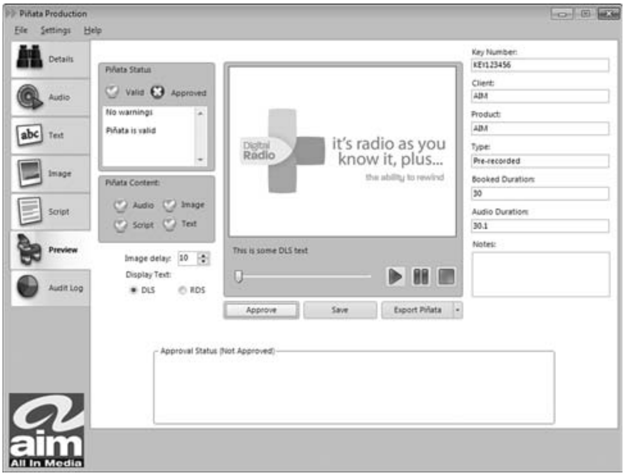
DLS (dynamic label service)

- File size: 128 characters maximum per label
- Font style: determined by the receiver
- Font size: determined by the receiver

Images

- File formats: JPEG, PNG, APNG
- File size: 23 kilobytes maximum
- Aspect ratio: 320 w × 240 h
- Orientation: Landscape
- Animation: 10 frames/second maximum
- Tagging standard EXIF image data

Software programs such as Pinata have been developed to facilitate standardisation of all these elements at the time of production.



No warnings
Piñata is valid

Image delay: 10
Display Text: ● DLS ○ RDS

This is some DLS text

Key Number: KEY123456
Client: AIM
Product: AIM
Type: Pre-recorded
Booked Duration: 30
Audio Duration: 30.1
Notes:

Approval Status (Not Approved)

Screen shot of Pinata software production tool

Multitrack recording

When preparing to record onto a digital audio multitrack workstation such as Protools or Adobe Audition, first open a sound file, select bit and sample rates and name the file. Then choose where you are saving the file.

It is important to formulate naming conventions which will allow you to retrieve the file easily later. If there are 50 files in a folder and all are named 'voice-grab 1, 2, 3' and so on, then it will be very difficult for you to locate exactly which voice-grab you are looking for. But if you name them 'voice-grab George angry', and 'voice-grab politician arguing' then your desired segment will be much easier to find.

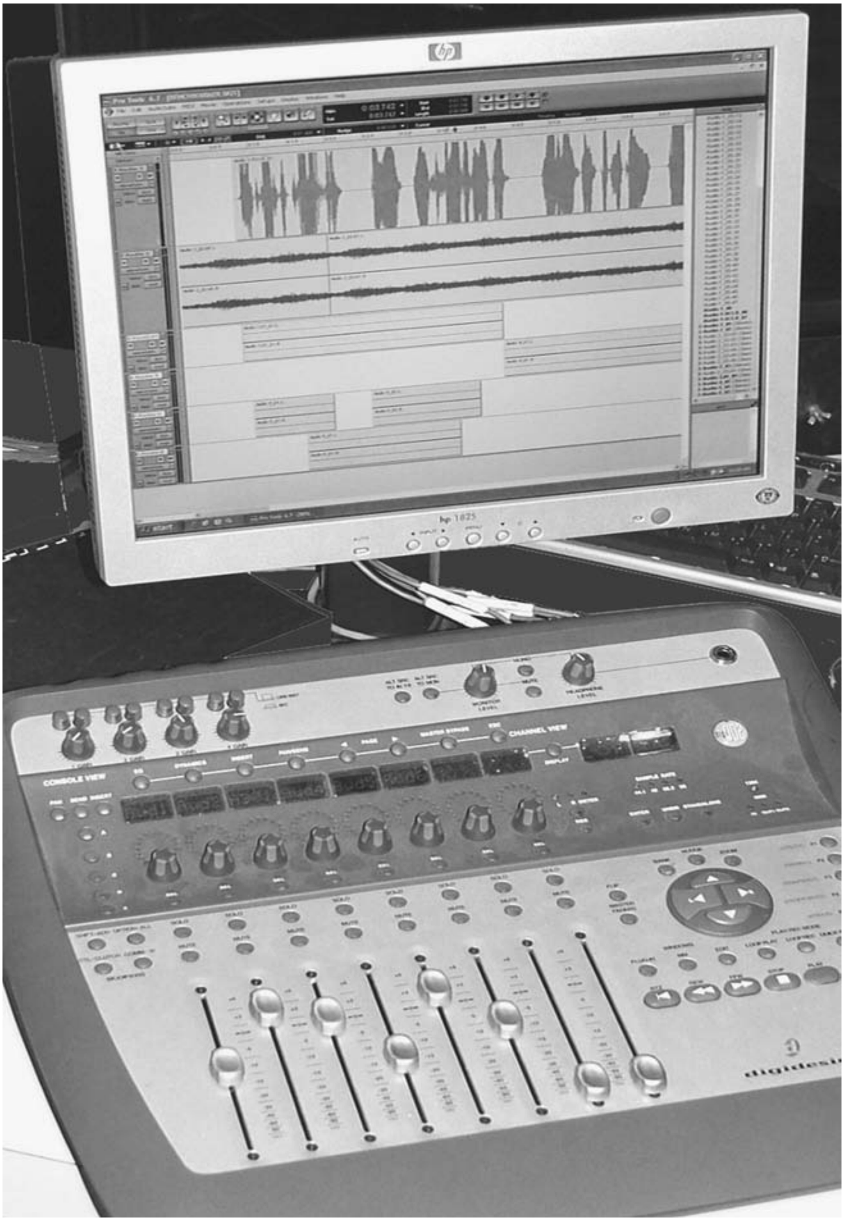
Create the number of tracks you think you will need for the project, but do not worry if you estimate incorrectly; you can create more later if required. You may be asked to decide whether to activate a stereo or mono track—generally choose mono for voice-overs and stereo for music.

You may also have to decide whether you will require MIDI tracks for inserting music if you have made some of your own music on a composer program such as Music MasterWorks or a background beat on a program such as ACID Pro. Music composer software now puts musical creativity in the hands of anyone who can operate a computer, whether you can play a musical instrument or not. Why not take advantage of the new technology to add value to your work by creating some unique musical elements that are not available to everyone on commercially released productions.

A potential trap in some more sophisticated multitrack programs is the assignment of inputs and outputs to every track. If you have done everything required but are still not getting sound into your tracks, then check the 'I/O settings' (input/output) for the system or for the particular track to make sure you have activated the correct audio source input. If all else fails—read the manual!

Using a continuous tone, set the levels in alignment with the source from the panel. When you are ready to record, select the record icon from the screen or keyboard. Most programs offer a moving visual display of the sound as it is recorded so that you can check that a signal is being recorded. If the visual display shows a flat line then there is no sound being recorded.

While recording, make sure that the recorder's fader is closed on the console—if it is open you may experience feedback if the digital multitrack machine is configured to send sound back to the panel when recording. This will sound like a high-frequency electronic echo or hollow sound.



Protools Digi 002 system

Check the VU meters during recording, then press ‘stop’ to cease recording. After pressing stop, if you are happy with the recording press ‘save’ to keep it, or otherwise record it again and then save.

Audio files recorded elsewhere can also be imported into digital audio recorders, as can MIDI music files and (in some cases) vision files. Open the 'insert' dialog box and choose the audio file to insert into a particular track. Once inserted it can be worked on in the same way as other recorded audio.

Multitrack playback

To play a track from the multitrack screen, select it and mute out any other tracks that are also active using the solo or mute functions. Use the 'zero locate' function, sometimes called 'return to zero', 'zero', 'home' or just 'Z', to bring the cursor back to the beginning of the track. Open the fader on the panel and press the play icon or keypad button.

To listen to more than one track at the same time, do not activate the solo or mute functions. Use the controls on the track to select equalisation, balance and volume within that track.

Multitrack editing

With a digital audio multitrack recorder you can move tracks, slipping them left or right by clicking and dragging them. You can also duplicate segments by copying and pasting, and you can change the order of your material by clicking and dragging audio segments or by using playlist functions.

Editing usually follows a sequential process, as below:

1. Gather all the main audio segments you plan to use and insert or record them into the project.
2. Edit or trim each for length and content.
3. Place them in the desired order within the entire sequence.
4. Add additional material for enhancements such as sound FX or incidental music.
5. Process specific parts of the material for effect using equalisation, echo, speed variation, pitch variation and many other available effects.
6. Finally, do a master volume and processing mix and then playout or export the audio file.

When working with complex audio multitrack projects remember to regularly save your work and do not delete any associated files until the full project is totally finished.

Multitrack audio editing programs create many associated data files which will appear automatically in your project folder. These files tell the software about your edit points, volume settings and other important bits of information related to the project. Digital audio in the multitrack production environment is recorded once and saved as an audio track. When you edit a track you are not creating new audio, just bookmarking various edit points on the original track. If you delete any original audio or any of these other associated files before your project is finished you will lose important data and audio that is required for the successful completion of the project.

An example of an audio editing project is as follows:

- On track 1 insert a 30-second music bed.
- On track 2 record the female voice-over that comes in the first 13 seconds of the track, saying: 'Radio Classic Hits plays the best songs of all time (pause), Billy Joel (pause), Elton John (pause), Neil Diamond (pause).'
- On track 3 record the male voice-over that comes in the second 13 seconds of the track, saying: 'And the latest songs by artists you love (pause), John Butler Trio (pause), Rihanna (pause), Bob Dylan (pause), Jet.'
- In the last four seconds drop in the station's short sting to time-out to 30 seconds.
- Add segments of the songs under the voice and slip and shuffle the segments together so that they are tight.
- For good measure throw in a couple of sound effects in the transitions between voice and music.

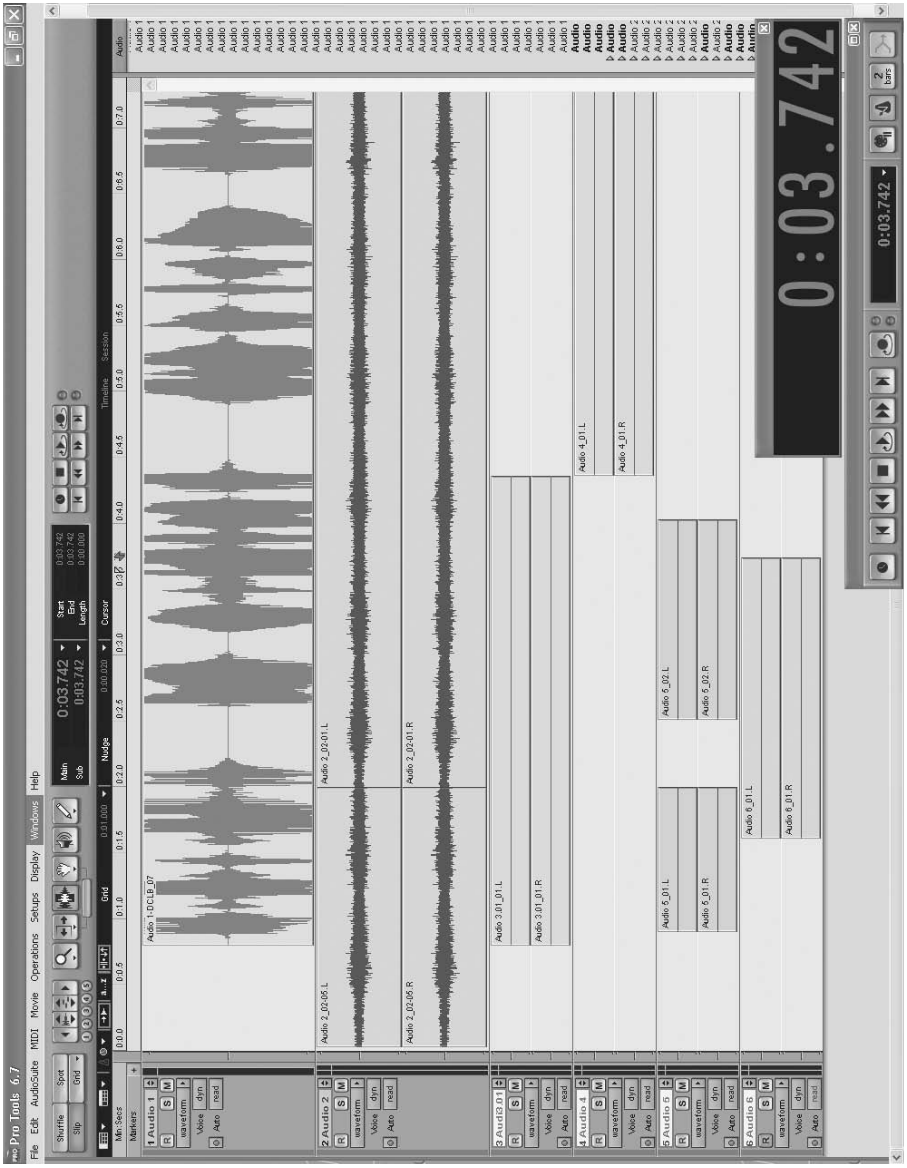
If the voice-over is a little off in its timing or the music tracks are not quite in the right place, the operator clicks and drags them to positions that make them sound right when played together. There is usually a setting available that allows you free movement of the files or helps you lock them exactly to the end of the previous segment. In Protools these are known as the 'Slip' and 'Shuffle' functions.

The multitrack edit window view allows you to see each track in relation to others and shows waveform, duration and other essential information all on the one screen. Other window views are also available for the operator to see and adjust levels, view playlists and adjust processing as required, and can usually be accessed via a 'View' menu.

When satisfied with the volume and position of each segment you can either play the project out through a desk to an external recorder or mix it to an audio file format for burning to disc or moving across your network to the main playout machine.

Multitrack processing

Amps, preamps, processors, equalisers and mixer amps all exist in fixed configurations on external analog consoles, but within digital systems they are dynamic and internal so they adjust to demands as required.



Protools multitrack screen showing tracks, plus timer and transport windows at bottom

When all the facilities of a system are in use the system may operate more slowly than usual.

Each digital audio multitrack system will have its own set of standard 'plug-in' audio processing programs, and more can usually be added if required. Standard processing plug-ins include equalisation, noise filters, reverberation, delay, compressors, expanders, noise gates, and many more options.

SIGNAL PROCESSING

Signal processing is a means by which characteristics of the audio signal, such as frequency and dynamic range, are altered by electronic devices. Processing is used to enhance the audio signal for production and broadcast purposes, as well as for special effects. Processing equipment can either be a separate hardware unit in a rack or can be contained as plug-ins within the digital recorder and seen onscreen.

Some signal-processing plug-ins (in order of most commonly used) are:

- Compressor—a device that ensures consistent volume by compressing the dynamic volume variation of a signal to fall within a predetermined range, known as 'dynamic range'. Compressors are also used to ensure the signal going to the transmitter is within the preferred limits of dynamic range. Compressors are not the same as audio compression algorithms, which are used to generate different audio file types.
- Limiter—a device preventing the signal level from exceeding a preset volume.
- Graphic equaliser—an equaliser with slide controls that gives selective equalisation in narrow bandwidths. The position of the slide faders gives a visual or graphic representation of the response curve selected.
- Parametric equaliser—an equaliser in which the bandwidth of a selected frequency is continuously variable.
- De-esser—a compressor/equaliser designed to eliminate sibilance by compressing the frequency bands in which sibilance occurs.
- Digital delay and special effects—a signal-processing device that digitally generates various effects, including reverberation, echo, flanging (a distortion effect) and chorus, as well as doubling and pitch-shifting effects.
- Reverberation—a series of reflections spaced so closely that they are not perceived as discreet echoes. Their cumulative effect creates the impression of room liveliness. This effect can be obtained by recording in live spaces (e.g. a hall), or by using electronic reverberation devices.
- Speed and pitch controls—allow you to increase or decrease the speed at which the audio is heard. Speed used in conjunction with pitch shifting can increase the speed of vocal delivery without

making the person's voice sound like a chipmunk. Speed variation without shifting the pitch will result in fast high-pitched voices.

- Expander—a signal processor that expands the dynamic range of a signal.
- Filter—an electronic device for removing unwanted frequencies from a sound source (e.g. a mains hum or surface noise on a record). A low-pass filter reduces unwanted high frequency noise and a high-pass filter reduces unwanted low frequency noise.
- Harmonizer™—a signal processing device that generates various effects including delay, doubling and pitch shifting. 'Harmonizer' is a brand name, rather than a description of an effect.
- Noisegate—an expander with a threshold that can be set to reduce or to eliminate unwanted or low-level sounds such as room ambience, rumble and mic leakage without affecting the desired sounds.
- Stereo synthesiser—a device for artificially creating the impression of stereo by the use of filters and out-of-phase signals.
- Dolby™—the trade name for equalisation equipment designed to reduce the noise level generated by the recording process.

Even though you can create many effects with processing devices, sometimes less is more. Creative audio is a combination of content, effects, imagination and artistry. For a further discussion of production techniques see Chapter 11, Audio Production.

USEFUL WEBSITES

Playout systems

<www.dalet.com>
<www.netia.net/us>
<www.rcsworks.com>

Audio editors

<www.adobe.com/products/audition/main.html>
<http://audacity.sourceforge.net>
<www.protools.com>
< www.softlab-nsk.com/ddclipro/free.html>

Music composer programs

<www.musicmasterworks.com>
<www.sonymediasoftware.com/products/acidfamily.asp>

Pinata software

<www.audionet.com.au>

5. BROADCAST LAWS AND REGULATIONS

**Steve Ahern
and Joanna White**

Before you go on air you need to know about some of the laws affecting broadcasters in Australia, including:

- defamation; and
- contempt of court.

There are other important laws and regulations that affect broadcasters such as:

- copyright laws;
- racial vilification laws;
- trade practices legislation;
- lotteries and gaming regulations;
- laws relating to obscenity and offensive broadcasts;
- regulations governing the broadcasting of political material; and
- laws and codes of practice under the *Broadcasting Services Act 1992*.

You and your station are responsible for any breaches of these laws. This may involve damages or fines, or your station may have conditions imposed on its licence. But don't panic! An understanding of the laws affecting broadcasters can help you overcome any potential problems.

This chapter outlines some of the main aspects of relevant broadcast laws to be wary of, but you should also consult your station's lawyers if you have specific legal issues relating to your station. It is *essential* to have ready access to the good lawyers and regulatory bodies *before* you publish, as working with them during the preparation of a script will usually solve all potential problems. Compliance with laws and regulations is your responsibility.

DEFAMATION

Defamation law exists to protect a person's reputation. When thinking about defamation remember these three words:

- publication;
- identification; and
- reputation.

You defame someone if you publish material that identifies a person and contains meanings that damage or injure that person's reputation; exposes them to hatred or contempt; or causes them to be shunned or avoided. Individuals, non-profit organisations and small companies can sue for defamation, but since changes to defamation laws in 2005 large corporations are no longer entitled to launch defamation action.

Publication

A radio or TV broadcast is a publication. By opening the mic you have usually satisfied the first of the defamation criteria. This is why radio stations use a delay system. If a broadcast is delayed by a few seconds the announcer or producer can stop the signal getting to the transmitter and being broadcast to the listeners, taking away the aspect of publication. This is important for talkback programs because the station is liable for what callers say.

Identification

Identification is the second important aspect of defamation and it is sometimes the subject of much legal argument. You can identify someone by naming them, but it is also possible to identify someone even if you do not mention a name. By giving details of where someone lives or works, of age and sex or occupation, you could be giving enough information for people to identify that person whom they know.

If you do not give enough information you could also identify a person you did not intend to. That person might then sue you for defamation. For instance, if there are two radio announcers named John Smith living in the same town and you publish a story that is defamatory about one of them without adequate identification, the other person could sue for defamation. A story that says 'John Smith from Hometown has been charged with × crime . . .' might be true for John B Smith who lives in × Street, but might not be true for John A Smith who lives in Y Street. Without adequate identification of John B Smith from X Street, John A Smith could sue the station for wrongly identifying him and for lowering his reputation.

Dead people cannot be defamed, but in publishing material about a dead person be careful you do not defame their families or some other living person associated with them.

It is more difficult for groups of people to sue for defamation in Australia, which is why other laws, such as racial vilification, have been introduced. But if a group is small and members are easily identifiable, or if you identify one particular person within a group by singling them out, there may be grounds for defamation.

Reputation

If the words in your story carry a meaning that may damage a person's reputation in the minds of 'right-thinking' Australian listeners, you have defamed that person (if the other two elements are also present).

A person's reputation is damaged if their friends and colleagues think less of them or scorn them because of the information published. A person's reputation is damaged if business acquaintances no longer do business with that person or company because of the information published.

What can damage your reputation? Allegations of corruption or paedophilia would probably be seen by most Australians as lowering a person's reputation, but in current Australian society speeding or using vulgar language would probably not lower a person's reputation sufficiently to warrant defamation action. A good starting point for checking on defamatory implications is to ask yourself: 'If this information were broadcast about me would my friends like me any less because of it?'

Defamatory meaning is not fixed in stone; it is related to the prevailing norms of the society. For example, in the 1930s contemporary morality was stricter than it is now, so if a station published a story that said an unmarried woman had travelled to Tasmania with her boyfriend and slept in the same room of a hotel with him then by the standards of that time the man and woman could have been defamed. In the 21st century such a story would hardly raise an eyebrow from most Australians and the couple would be unlikely to think they had been defamed.

Comedy and satire can sometimes get away with more than normal reporting, because items that are obviously comedic by definition are not serious so should not injure a person's reputation. Always check with your station's lawyer if you think you might be on the edge with a comedy item.

When is defamation allowed?

In broadcasting, especially in news and current affairs programs, there are times when you decide that you will defame somebody. After all, if we could not say anything about anybody, radio programs would not have much of interest to talk about, would they? In fact, the law *permits* defamation in three main instances:

1. truth;
2. honest opinion; and
3. privileged report.

If you decide to broadcast a defamatory story, make sure one of these defences applies. Also be sure that your motivation is sound; consider whether it is in the public's interest to know. Ask your lawyers to work with you while you are investigating the story and before publication. Good broadcast lawyers can help you make the story better and at the same time gather the right material in case of later court proceedings.

Truth

To use the defence of truth you must be able to justify in court that an item is true. To prove that something is true you must produce substantial evidence to convince a judge or jury. The fact that someone told you about it over the telephone is not good enough. You should have authentic documents and should be able to produce the informant in court if you have to.

Before the changes to defamation laws in 2005, which brought all states into line, some states required that you should prove that an item was not only true but also in the public interest. This public interest element is no longer required for the defence of truth in Australia.

If you can establish truth using acceptable evidence, you will be in a strong position to win your case.

Honest opinion

A statement of 'honestly held opinion' based on true facts may be defensible in court as comment. This defence is useful for public affairs commentators who do daily radio editorials and has its basis in the principles of free speech and public debate. It is sometimes called the defence of 'Fair Comment'.

To use the opinion defence you must present as comment accurately stated facts on matters of public interest and give your own honestly held opinion on these facts. If your broadcast can be proved to be malicious the defence may fail, but if you were acting as an impartial commentator or reviewer who has outlined all the facts first you have a good chance of success.

Privileged reports

'Absolute privilege' applies to the proceedings of parliaments, the courts and certain quasi-judicial proceedings such as enquiries and tribunals. The thinking behind privilege is that the parliaments and courts of our land must hear all the details about a matter to come to a just decision. If parliaments and courts were bogged down by people suing each other for defamation every time someone tried to examine a difficult issue, nothing would ever get done. So parliaments and courts protect themselves from defamation legislation for the greater good of the society.

The media also have a public responsibility to serve the greater good of society when it comes to coverage of parliaments and courts. In a democracy the media becomes the eyes and ears of the public at court and in parliamentary proceedings. Theoretically, any person should be able to sit in the public gallery and listen to what is happening in a court or parliament, but in reality it would be impossible for the population of an Australian city to watch all at once, even if they wanted to, so the courts and parliaments extend this privilege to the media to allow the public to find out about court proceedings, subject to some rules, hence the media also has privilege to report on these proceedings.

If you think about sitting in the public gallery of a court or parliament it is much easier to understand the rules governing the way the media can use this privilege.

When a judge does not want the jury or the public to hear some contentious matter in a case he or she closes the public gallery and sends the jury out. Thus nobody can hear the legal arguments that might go on behind closed doors and so cannot be influenced by something that may eventually be ruled inadmissible. By extension, the media must not report what happens when a jury and/or the public is not in court.

There are specific rules governing the way the media can use this privilege. If you follow them and you are reporting something said in court, even though it may be defamatory, as long as you make it clear that you are reporting about evidence given in court you can defend any defamation action. If you break these rules you will not be protected and may be sued and may also find that you are in contempt of court.

Some of the rules you must follow to claim qualified privilege are:

- You must fairly and accurately report the proceedings. If you only report one side of the legal argument without putting forward the other point of view, you would not be presenting a fair and balanced report of the proceedings. You can summarise, but you must summarise the main points from both sides in an equal manner.
- You must not report things that are said when a jury is not present.
- You must not contact jurors or witnesses.
- You must not report the identity of people whose identity has been suppressed.
- You must follow the directions of the judge on what can and cannot be reported.

There are many guidelines associated with reporting courts (see also 'Contempt of court and parliament' later in this chapter). Most reporters spend a good deal of time learning them in their cadet years. If you are not familiar with the proper procedures for reporting court proceedings seek advice.

There is also another section of privilege called 'qualified privilege' that relates to matters of political discussion. This is a tricky area where you need advice from a lawyer before you contemplate using it.

Damages and uniform national laws

Since the implementation of uniform defamation laws in 2005, damages payments within Australia have been capped at a maximum of $250 000 to prevent people from 'shopping around' for the most lucrative state in which to sue. Another change, which has removed the right of large corporations to initiate defamation action, has prevented frivolous defamation claims aimed at stopping the media reporting contentious situations which companies did not wish to be exposed. These actions were sometimes wrongly referred to as 'stop writs' and are no longer common since the law changes.

In other changes introduced by the unification of laws:

- Judges will now decide the awarding of damages payments.
- A person usually has only 12 months in which to initiate a claim.

- Publishers may ‘offer to make amends’ within 28 days of receiving a defamation claim and, if the offer is accepted, the matter is ended.

Corrections, clarifications and apologies

Many aggrieved people just want their point of view or their side of the story put across on air. Australia’s reformed defamation laws encourage the parties to settle their differences by negotiation where possible to help get a speedy resolution to the problem and to prevent mountains of litigation having to be handled by the courts.

If you have made a mistake or put the wrong information to air, be open to a correction, a clarification or an apology as a means of making amends. Remember, if you have defamed without a defence, corrections and apologies will not necessarily save you from litigation but they will help to show that you acted in good faith.

When deciding whether to correct or to clarify a statement, ask yourself how you would feel if you were the aggrieved party. Also understand that when people complain the thing they usually want most is to be listened to—so hear them out and consider their point of view carefully, even if they are angry.

If you can put another point of view to air it often adds to the content of the program. If someone calls to complain or to tell you more information about an item that you have broadcast, then consider putting that caller to air as part of that clarification process. Before you do, though, think about aspects of defamation and check their credibility and identity. If handled correctly the call can make good radio and give listeners the impression that you have your finger on the pulse. If you have made a mistake or omitted some important bit of information in something you have read, consider adding a clarification or a correction. You could say something like ‘now a bit more information on that story on . . . I told you about earlier’, or if you want to be a bit more formal you could say, ‘I want to clarify/correct the earlier item about . . .’. This approach can lead to an avalanche of other corrections and clarifications for other insignificant things, so save it for important matters that need to be clarified or corrected. Also, again beware of compounding any earlier defamation by repetition of the offending information.

You may also decide to apologise for something that you have said on air, but be careful. Apologies have a legal aspect to them. When stations are engaged in a defamation case they may agree to apologise and may have a legally worded script to read. Because of this legal use of apologies, they have become more precise in their wording and seem to be more formal than a correction or clarification. Judge whether you should apologise or not in conjunction with the station's management or a lawyer because apologising may be an admission of guilt that the station does not wish to make. Apologies could make matters worse by repeating a damaging allegation or by increasing the number of people who heard it. On the other hand, a timely apology may be a factor in mitigating or reducing damages awarded by a court. If you and the station do decide to broadcast a formal apology it may take the form of words such as: 'Earlier today we broadcast an item about . . . This station accepts that the story was untrue/without foundation and unreservedly apologises to . . . for the hurt and damage caused.'

If your station is faced with a potential defamation action, lawyers will usually first send you a letter demanding an apology and, if not satisfied, may then serve notice that the aggrieved party intends to take the station to court, so that both sides can save copies of the logging recording and prepare their case.

Defamation threats are sometimes used against investigative reporters who are digging too close to a story that somebody does not want exposed by the media. There may be no real intention for the case to go to court; it may just be a legal tactic to delay or stop publication of material. So if you are pursuing a story that you can prove is true you should consult lawyers about how to take the story to air in a way that will stand up to scrutiny in court.

Common mistakes

Here are some common mistakes that could get you into trouble:

1. *I quoted from another published source.* If something defamatory is published in a newspaper, on the internet or elsewhere, including other radio or TV broadcasts, and you repeat that defamation on air, you are equally responsible for defaming the person as the other source. For example, if you are commenting on a news story and you quote something from the newspaper that is defamatory, both you and the reporter who wrote the story could be sued for defamation. Even referring to a statement or rumour for the purpose of expressing doubts as to its correctness runs the risk of defamation.
2. *I only asked a question.* You can defame someone by asking a question that is defamatory. Just because you posed it as a question does not necessarily mean you can get away with it. For example, if you asked, 'Are you still abusing your children?' you have implied that the person being asked has done so in the past, thus making your question highly defamatory.

3. *But the police/lawyer/witness told me*. In court proceedings, there are contempt of court rules to be followed so that you do not interfere with the process of justice. If a person involved in the proceeding tells you something, it may not necessarily be okay to publish it. It must be examined in open court before a judge and/or jury before it can be reported. You have to stay within the rules for proper court reporting, so that you are not open to contempt of court charges and so you are covered for defamation by the privilege of the court.
4. *I did not intend to defame them*. Even if you had no intention of lowering the person's reputation, if your listeners think less of that person because of what you have said you might still be sued for defamation.
5. *I did not name anyone*. You can defame someone even if you do not provide a name. If you give enough information about a person so that people can recognise them, even without mentioning a name, you have still said enough to defame. For example, you are an announcer in a small country town and you say something like 'One of our more flamboyant council members and local amateur thespian stands to make a large profit if the redevelopment goes ahead.' The councillor has not been named, but you have probably given listeners enough information to identify him or her and therefore defame.
6. *I was not talking about that person*. It is possible that you can unintentionally refer to someone else who lives in the same suburb or has the same name or runs the same type of business. If you do that person can be defamed because listeners may think they have done something wrong when, in fact, it was somebody else to whom you were referring.
7. *The logger was not working*. Stations are legally required to record everything that goes to air. This is normally done by a logging machine that records continuously, 24 hours a day. The law requires that stations keep these audio logs for at least six weeks as they may need to be referred to in cases of defamation or when other legal problems arise. If you are accused of defaming someone, it is no excuse to say the logging tape was not working or that you have no record of the broadcast. Not only will lack of evidence cause serious problems for you and your station when trying to prepare a defence to any legal action, you will have also breached the Broadcasting Services Act.
8. *But I said 'alleged'*. Just saying 'alleged' in your report does not protect you from a defamation action; it is not a magic word.

Using the word 'alleged' in relation to a court report, that is, something that is yet to be proved, is correct, but just throwing it in alongside a defamatory item does not necessarily protect you.

Reporters often use the term 'allege' when reporting trials and other investigations. This is appropriate in a clearly identified court report, particularly in the case of a criminal trial when a decision is yet to be made. For example, reporters may say something like, 'The prosecutor told the court Mr Doe allegedly syphoned off shareholders' money from company X to prop up his own business interests'.

Using 'alleged' in other contexts outside court reports has no legal context and is unlikely to protect you from action if the person you are talking about decides to sue.

9. *I said it was a lie.* Lying is something we talk about a lot in daily conversation and no one seems to be too worried. Calling someone a liar on radio is more serious than doing so in daily conversation. Calling someone a 'liar' is defamatory. If you know you have caught someone lying and you want to let your listeners know it yet stay on safe ground, present a series of simple questions using the facts that lead them to incriminate themselves rather than you making that accusation yourself.

Defamation and the internet

Because the internet is a worldwide publishing medium the rules covering defamation on the internet are much more difficult to interpret than well-established Australian state laws relating to broadcast media.

If you have published on a site hosted in one country but you defame someone in another country and it is read in a third country, in which jurisdiction would you be sued? Would it be where the server is hosting the site, or where the defamed person read the article?

Whether publishing print, pictures or streaming audio via the internet, it will be important to follow case law as it becomes established in these crucial areas of international law. Decisions and precedents in coming years will influence whether radio station websites will be restricted when streaming controversial audio and following up with highlights segments, comments and web polls.

COPYRIGHT

Copyright laws protect the rights and the income of people who create original works. It gives them a legal right to impose a fee on people who use their music or their words, and to enforce the payment of that fee. Copyright laws stop people stealing other people's creative product. Your station should have agreements in place with each of the bodies that administer owners' rights so that you can use music without infringing the creators' copyright.

Copyright is an increasingly important issue due to the ease with which audio files can be downloaded via the internet. Podcasting, audio streaming and file sharing all allow audio, video and graphic files to be easily transferred from one computer to another. Just because this can be accomplished easily via today's computer technology does not absolve the recipient of these files from paying for the use of someone else's creative work. In the era of digital radio where words and pictures will also be broadcast, the same principles apply to these media that apply to audio.

Organisations that administer audio copyright in Australia include the following:

- APRA, the Australasian Performing Right Association, looks after the rights of the composer to control the performance of their work.
- PPCA, the Phonographic Performance Company of Australia, is responsible for protecting the limited rights of the record manufacturer to control the broadcast of protected, essentially non-American, recordings.
- AMCOS, the Australasian Mechanical Copyright Owners Society, protects the rights of the composer or publisher to control the recording of their work.
- ARIA, the Australian Record Industry Association, protects the rights of the record manufacturer to control the copying of a recording.

Your station should have agreements in place with the appropriate bodies for permission to broadcast music and enter into a suitable licensing arrangement. Fines and penalties can be imposed if you breach copyright. Sector bodies such as the CBAA and CRA generally negotiate standard agreements with copyright agencies and stations pay an annual fee or percentage of revenue in return for the right to use the work of recording artists on air.

Copyright and the internet

While radio stations pay for the right to broadcast music on their radio transmitters, podcasting and audio streaming are additional transmission outlets which require additional payments to be negotiated. After many years of difficult stand-off over the level of copyright payment, radio stations have now negotiated standard agreements to extend their broadcasts to the internet via live streaming. Stations generally pay a sliding scale of fees based on the size of the market for the right to stream live to air programs. Streaming is not intended for permanent storage and recording.

Podcasting is different from streaming because music and content in a podcast can be stored, shared and remixed by anyone without paying the artists for their work, so copyright agencies are worried about the implications of allowing radio stations to podcast copyrighted music and have only just begun to negotiate mutually suitable fees to make it possible. In time agreements will be achieved, because consumers want to hear music in podcasts and radio stations want to include it, but until then copyrighted music is removed from most radio program podcasts. This has opened up opportunities for unsigned bands, who are happy giving their works away on the internet as a means of publicity, so they are now being heard more often in podcasts while copyrighted artists are heard less often.

Another difficult aspect of extending a station's transmission area via internet streaming is the possibility that your station will be asked to pay more money for voice-over artists who record advertisements and promos, because their work is now heard internationally via your radio internet stream.

Follow the decisions as these issues are negotiated over the next few years and ensure that your station is aware of its obligation to pay for what it uses.

CONTEMPT OF COURT AND PARLIAMENT

If you break the rules that courts or parliaments have set down for the proper running of their affairs a judge may impose fines or some other sort of criminal punishment on you. These rules may also relate to properly constituted enquiries and tribunals. The rules of courts and parliaments are there for particular legal and procedural reasons. You may not always agree with them, but as a professional radio person you need to respect those laws and procedures when covering matters dealing with these institutions.

The contempt rules fall broadly into two categories:

1. Sub judice prohibits the publication of any material that might prejudice the outcome or the process of the action before the courts.

2. Administration of justice prohibits interference with the administration of court processes and also restricts comments which will bring the courts into disrepute.

These are some of the rules you must follow when reporting court proceedings:

- You can only report fairly what is said in open court once a person is charged.
- You should not say that a person is innocent or guilty before the verdict has been given.
- You should not report a person's past criminal history before the verdict has been given.
- You should not publish prejudicial information before or during a criminal trial.
- You must not wrongly assert that the court process has been influenced by bias or corruption.
- You must present fair and balanced reports of both sides of the case.
- You must not report conversations with jurors or witnesses involved in the case.
- You must not name or publish a photograph of an accused person where the issue of identity could be an important factor in the case, particularly crimes such as murder, assault and robbery. This is relevant for radio companies if your bulletin is supplemented by pictures and text on a website or digital radio screen display.

There are other restrictions that you should be aware of in certain types of cases:

- You must not reveal the identity of the victim in cases of sexual offences.
- You must not reveal the identity of children appearing in children's courts.
- You must not identify parties involved in family court proceedings.
- You must not publish matters that have been suppressed. Courts can use suppression orders in the interests of the administration of justice to prevent material being made public, but media organisations can challenge these orders through the courts if they think that they are not in the interests of the administration of justice.

These are some of the rules that you must follow when covering parliament:

- You are restricted to reporting the formal proceedings of parliament.
- You should follow similar guidelines for fair and balanced reporting as when reporting court proceedings.
- You should identify that the report is about what took place ‘in parliament’.

If you break these rules the courts or parliament can impose fines or other penalties on you.

Protecting journalistic sources

Journalists by convention protect their sources and do not often reveal them, even under oath in a court, but this convention has no legal basis and a journalist who does not reveal their sources when asked could be fined or jailed for contempt of court. Seek legal advice before deciding to name or not name sources in court and know what the sanctions might be if you refuse to identify your sources.

TEST YOUR DEFAMATION KNOWLEDGE

In each of the following examples assume that the statements have been broadcast, so the first element of ‘publication’ exists. In each case think about whether the example is defamatory and write down your reasons.

1. A caller to the station says, ‘All politicians are liars!’
2. Another caller says, ‘The Premier is a liar!’
3. ‘“The Premier is a liar!”’ is reported as having been said in parliament.’
4. John Steven Doe lives in Rivertown. John Peter Doe also lives in Rivertown. John Steven Doe was found guilty of theft and tax fraud. John Peter Doe has never committed a punishable offence. A radio report said: ‘Today in court John Doe of Rivertown was convicted of theft and tax fraud. He was sentenced to three years’ jail.’ An announcer followed the report by saying: ‘That Doe bloke ought to be ashamed of himself, ripping off honest taxpayers and stealing from pensioners.’
5. A caller to a consumer talkback program says, ‘I want to complain about a major retail store in the city. They sold me faulty garments and they ripped me off.’ The host and the consumer expert discuss the caller’s problem and then take the next call.

6. The next caller says: 'The food van at the service station across the road from me on High Street, Rivertown, is disgusting. I saw cockroaches crawling over the hot dogs the other day. The guy who runs it is a dirty little insect just like the cockroaches in his van. It's putrid. Can't you do something about it?'

   The talkback host throws to the consumer expert for comments on what the second caller has said. The expert is hesitant to talk with the caller on air and asks that details be given off air. The expert then says that this sort of thing can be a problem and that the health inspectors will be sent around immediately.

When you have finished writing down your reasons, turn to the end of this chapter to check your answers.

LICENCES AND LEGISLATION

When you work for a radio station, whether it is the ABC, commercial or community radio, your station is subject to certain laws and regulations. Your licence is your livelihood, so safeguard it and know the rules. These include:

- *Broadcasting Services Act 1992*;
- *Trade Practices Act 1974*;
- *Commonwealth Electoral Act 1918*;
- censorship regulations;
- health regulations
- racial vilification laws; and
- state gambling and lotteries legislation.

Copies of these will be available in your station's reference collection, on the ACMA website and on the internet.

The Australian Communications and Media Authority (ACMA), the regulatory body that controls broadcasting, internet and telecommunications in Australia, administers the Broadcasting Services Act. The Broadcasting Services Act aims to encourage program diversity, regulate the concentration of ownership and foreign control in Australian media, foster an Australian cultural identity, enforce fair news reporting, respect community standards, ensure transparency and handle complaints adequately.

Ensure that you know the rules relating to your sector and how ACMA is likely to deal with breaches of those rules, codes and standards. Key issues of importance to ACMA will be the timeliness and quality of complaints handling by the station, because ACMA expects broadcasters to shoulder their share of responsibility for satisfying audience grievances in this system of co-regulation encouraged by the Broadcasting Services Act.

Other areas of interest to the regulator are sponsorship compliance and governance in the community radio sector, cash for comment compliance and local content in the commercial sector, and political complaints handling within the ABC and SBS.

The Trade Practices Act could affect ads or sponsorship announcements. Check ads to see if they:

- falsely represent that goods and services are of a particular standard, quality or grade;
- falsely represent that goods are new;
- falsely represent that goods or services have sponsorship, approval, performance characteristics, accessories, or uses or benefits that they do not have;
- make false or misleading statements about the existence of, or amounts of, price reductions;
- make false or misleading statements about the need for any goods, services, replacements or repairs;
- make false or misleading statements about the existence or effect of any warranty or guarantee.

If they do, the ads or sponsorships should not go to air until they have been changed to meet the requirements of the Act. The Trade Practices Act is also aimed at preventing price-fixing collusion and misuse of market power.

The Commonwealth Electoral Act affects election material and blackout periods where political advertising is prevented before elections. Political advertising is required to identify the speakers and parties involved.

Broadcasters are also bound by laws covering racial vilification. These laws aim to prevent hurt or damage to a person by virtue of their ethnic background.

Laws regulating explicit material restrict sexual or violent content being broadcast to various age groups and require broadcasters to be careful about the nature and broadcast time of this material. While radio broadcasts do not officially fall into the censorship ratings system, with the convergence of audio CDs, DVDs, pictures, games and data into the one media format, and screens now on digital radio, it is likely that regulators will increasingly scrutinise the content of these media across all broadcast outlets, including on the screens of digital radio receivers and radio websites.

Health regulations regulate and restrict the advertising of tobacco, alcohol, diet merchandise and other medical products, so check before you broadcast any advertising or promotion for any of these items.

Stations must also be aware of state legislation on lotteries and gambling in relation to promotions and the maximum amounts that can be given away as prizes. Competitions with large prizes require a permit, which should be acknowledged on air as should the terms and conditions of special offers in advertisements.

Various sector bodies have also developed codes of practice and conduct which member stations agree to adhere to. In some cases ACMA can force stations to abide by their appropriate industry codes of practice as a condition of their licence if there has been a problem.

Commercial Radio Australia (CRA) is the industry body for the commercial sector. The Community Broadcasting Association of Australia (CBAA) is the industry body for the community sector.

The Australian Broadcasting Corporation (ABC) and the Special Broadcasting Corporation (SBS) are governed by their own acts of parliament and have their own internal codes of practice and complaints-handling procedures.

Rules, regulations, codes and standards for each sector are available at the ACMA website. See the website listings at the end of this chapter for useful online references.

TEST YOUR DEFAMATION KNOWLEDGE: ANSWERS

1. *'All politicians are liars!'*
   This is not defamatory. Even though calling someone a liar is damaging to his or her reputation and is grounds for defamation, no individual has been identified so the identification factor is missing.
2. *'The Premier is a liar!'*
   This is defamatory because all three elements necessary for defamation were present. The statement was published on air. It identified the Premier. It can affect the Premier's reputation.
3. *' "The Premier is a liar!' " is reported as having been said in parliament.'*
   This cannot result in liability for defamation, even though the statement is defamatory, per se. It was clearly reported as having been said in parliament and was published under the provisions

of privilege. While calling someone a 'liar' in parliament is said to constitute 'unparliamentary language' and the comment may be required to be withdrawn, it is protected from defamation action.

4. *John Steven Doe/John Peter Doe. A radio report said: 'Today in court John Doe of Rivertown was convicted . . .'*
   In this instance John Peter Doe can sue the station for defamation because the three elements of defamation were present. The report was published on air. It identified 'John Doe' and it can affect his reputation. The fact that the report was about another person is irrelevant. Crucial identifying information was left out of the report with the result that an innocent 'John Doe' was identified whose reputation might suffer because of it.
5. *'I want to complain about a major retail store in the city . . .'*
   The caller did not identify the store so the item is not defamatory. In a big city there are many retail stores, so no one particular store could be identified. If, however, you were in a small city where there was only one large retail store—unlikely, but possible—the item could perhaps be argued to have identified that store.
6. *'The food van at the service station across the road from me on High Street, Rivertown, is disgusting . . .'*

   The caller defamed the food van business and the owner. There was publication. There was identification—the location was specific enough for someone who knew the service station and the street to identify the van. The reference to 'cockroaches crawling over the hot dogs' could diminish the reputation of the business. The supplementary insult to the food van owner was also defamatory because it is linked to the earlier statement and brings him and his business into disrepute. It could cause people to shun him and avoid buying from his business.

   In a situation like this the talkback host should have pressed the dump button before the defamatory material went to air. The producer could also have worked harder off air to determine the nature of the caller's problem and could have directed the caller not to identify the location of the van. Without the element of identification, the item would have been acceptable.

   Given that the item went to air, the consumer expert discouraged further discussion, asked the caller to leave details with the producer and assured the caller that 'the health inspectors would be sent around immediately'.

   This was the sensible course. Assuming that the information was correct, a report from the health inspectors could verify the truth of the allegation if it went to court. If, however, the caller had hung up before giving details to the producer, the station and the program team would be in trouble because they would have lost their witness should one be needed.

USEFUL WEBSITES

<www.abc.net.au/corp/pubs/charter.htm>
<www.acma.gov.au>
<www.apra.com.au>
<www.cbaa.org.au >
<www.cbonline.org.au>
<www.comlaw.gov.au>
<www.commercialradio.com.au>
<www.copyright.org.au>
<www.corrs.com.au/corrs/website/web.nsf/Content/ResearchPublications_Cover>
<www.gilbertandtobin.com.au>

6. RADIO ANNOUNCING

Steve Ahern, Georgia Brown
and Dean Buchanan

How do you know if you are suited to a career on air? The ‘golden voice’ is no longer the only passport into radio, nor is just skilled panel operating. Yes, successful radio announcers do have certain voice and speech characteristics. These can be learnt. Yes, they do have good panel-operating skills. These can also be learnt. But the other important qualities for a successful announcer are talent and personality. You can fan the sparks of talent and personality into flames, but the sparks must be there in the first place. What are some of the characteristics of talented people who become successful announcers?

They think. Whether presenting a music or a talk shift, announcers put energy into thinking widely and creatively, beyond the playlist, to what is happening in their country, their city and the world. They look for opportunities to let their thoughts and opinions about things filter through. Announcers do not barrage the listener with ravings. They think about subtleties—special words that convey meaning and special inflections that accentuate the key meaning of the thought they want to convey.

They observe. Announcers take note of how people do things, why they do things and how they act. When walking down the street announcers observe people and things around them. They take notice of a sign on a telegraph pole about a fete being held that week. They know when there is a street party and for what occasion or benefit. Announcers observe that traffic will be slow at this intersection for the next month because of the roadwork. Good announcers are always on the lookout for content, and the best content comes from real life. This sort of thinking can also generate good interview topics and sales opportunities that can be helpful in an announcer's career.

They find ways of remembering. On-air announcers are busy. The shift is full and buttons have to be pushed. Many people think and observe life around them, but successful announcers know how to bring these thoughts and observations into the studio. Some do this by always carrying a notebook. Some do it by planning key points or key phrases and writing them down before they go to air. Some go through the playlist looking for songs that help them to recall an observation or thought. Whatever your method—it must be one that can capture and help you re-create the original thought, the observation, and your response. You can then use that material for comedy, for talkback, for comment, or just to bring something special to a music back-announcement.

They tell stories. Successful announcers can paint a picture through their words. They need not tell an elaborate tale in the classic storytelling tradition, but they do tell stories that create images in listeners' minds and emotions in listeners' hearts.

They are performers. Announcers like attention and treat each shift as a performance, and as performers they have to give their best, knowing that they are just like actors on a stage. They know people have made an effort to come to their performance. They know the expectations of the audience are that they may laugh, cry, love and hate during the performance. The audience has come and is willing to suspend disbelief if the performance is good, but if it's bad they won't enjoy it and might walk out. As with theatre, the successful announcer creates the atmosphere of the performance. Just as you never see the prompter off stage helping the actors with their lines, the lighting rehearsal or any other behind-the-scenes goings on in the theatre, so too should you conceal from your audience what's behind the radio curtain. If you let them 'backstage' they will find it harder to suspend disbelief and enjoy your performance. Some announcers do make revealing the behind-the-scenes workings of radio part of their act. If you are one of the lucky ones who can make this type of performance succeed—talking about machines not working, making fun of the internal workings of the station—then good luck to you. But always be careful to check if the audience is still enjoying the performance and has not walked out at interval.

They have talent and inspiration. Not all of us are born with gifts that allow us to be greatly inspired by beauty or overjoyed by love, or that enable us to bring our inspiration to others. Many of us are afraid to stand on the stage and put our lives, loves, hopes, fears and thoughts in the public gaze. Those of us who are not afraid often make great announcers. If you're not one of those people you shouldn't despair of finding a career in radio. The performing side is only one of the options. Look at your mix of talents and identify what makes you great. Perhaps you're good at producing or operating a panel, mixing music, making commercials that sell, writing good scripts, managing the people dynamics of a radio station, or understanding how to identify what listeners want. If you do have performance talent channel it to your strengths, such as interviewing, comedy or building rapport with the audience.

COMMUNICATING ON RADIO

To communicate effectively on radio an announcer must deliver the message so that listeners hear it, value it enough to pay attention, understand it and then retain it. The words you say and how you say them convey meaning and emotion to listeners. This is the art of good radio announcing.

When we communicate face-to-face, about 70 per cent of our messages are non-verbal. Body language, facial expressions, a smile, a frown are all part of the way we convey meaning. Non-verbal communication techniques are effective on TV, but not on radio. Announcers have to make the remaining 30 per cent of communication work even harder than it usually does to convey the same kind of messages as announcers on a visual medium. It is possible; it just takes a little practice. And when you get it right there are some advantages to being able to talk straight into listeners' minds rather than through their eyes.

To make the other 30 per cent of communication work harder, ensure that what you're saying is reaching listeners' ears in the appropriate way. If you put a pause or inflection in the wrong place you can change the meaning of the sentence completely. For example:

1. '***What's that*** on the road ahead?' is a simple question about a traffic problem.
2. 'What's that on the road—a ***head***?' belongs in a scene from a horror film.

Each has very different meanings.

The tricks of the trade given here can be used to help you initiate the right response in your listeners' minds or hearts without the aid of visual stimuli.

Words and phrases

Communicating on radio starts with the words and phrases you choose. Words come and go, like fashions. Phrases can be popularised by films, TV and radio. Our language is changing faster than ever before as the media, particularly the internet, spread new words around the globe within very short time periods and change the meanings of others just as quickly.

Never assume that a word has only one meaning. You need to anticipate how listeners could interpret it in other ways and how that might affect reception of your meaning.

Pause, pace, pitch and projection

The right emphasis can be achieved by using a combination of four key speaking skills—pause, pace, pitch and projection. The whole sense and emotional feeling of a phrase can be changed by simply changing the way we stress words. For instance, take the simple greeting 'How are you?':

- '***How*** are you?' represents a bright lively greeting.
- 'How ***are*** you?' becomes a health enquiry.
- 'How are ***you***?' shows a personal interest.

Emphasis in the right place can communicate the emotion behind your words; in the wrong place it can confuse the message. Emphasis can be added in various ways that switch on unconscious meanings in listeners' minds.

Four key techniques for switching on the right receptors in your listeners are:

1. pause—long or short moments of silence in your speech;
2. pace—slow or fast speeds during your speech;
3. pitch—the intonation in your voice using its high and low registers; and
4. projection—the loudness or softness of your speech.

These four techniques, used together or individually, can trigger unconscious responses and memories in your listeners that can help you communicate your message if used well, or they can distort your intended meaning if used badly. By using these techniques you can give emphasis to certain words and phrases to enhance your message and achieve a deeper connection with your listeners.

Pause

When we pause before a word, listeners unconsciously anticipate that the next word could be an important one, so the pause creates expectation of an important message to follow. Use your pauses correctly and you will move listeners' attention in and out at the points you choose, creating the appropriate amount of anticipation to emphasise the important words and messages you want to convey.

If your speech on air is too full of pauses it becomes disjointed and listeners are led into too many moments of anticipation, the majority of which are not followed by any special meaning. What is even worse is if your pauses are followed by utterances such as 'um', 'eeer', 'aaah' or irrelevant words such as 'and', 'the' or 'so'. This sort of speech only tells listeners that you have not thought through what you are saying. You are inviting them to heighten listening for important words and you are only giving unimportant information. This is a way to irritate listeners.

Pace

The speed at which you deliver your message is pace. When we are excited about something we usually speak faster, so when listeners hear us speaking quickly on air they may unconsciously think to themselves—'this must be an exciting thing they're discussing'. That is why hard-sell ads for special deals use a fast pace—to excite listeners about the product and the deal.

A slow pace triggers other unconscious responses in our listeners. When we speak slowly it can sometimes mean that we are considering what we are saying, so slow speech may connote thoughtfulness. But slow speech can also connote boredom in listeners' minds—if they think that we are bored with the topic that we are talking about they will probably find it boring too, and switch off.

The pace of individual word delivery is as important as the overall pace of the segment. If you slow down on some words you can emphasise these within your whole context—effectively stretching them to place emphasis on them. If you go faster on some words then listeners might think that you are dismissing those words and might not take so much notice of them. In a weather report, for instance, slow down on the important bits—such as 'rain' or 'fine' and what the expected temperature will be; these are the important bits that listeners need emphasised. But if you stretch irrelevant words such as 'The expected temperature today ***will be*** 20 degrees . . .', listeners notice the words 'will be' but could miss the vital number for the temperature that they have been waiting to hear.

When you suddenly slow down some words in the midst of fast talking the words you have slowed down take on extra meaning because they contrast with your normal pace. Or if you are normally a slower speaker you might choose to speed up the important words so you sound excited about them. Analyse your own natural speech. Work out what the best techniques are for you and finetune your natural way of speaking.

Pitch

In the English language various pitches in a voice unconsciously trigger reactions in listeners. Inflection is another way of describing this. While this is the case for most languages, the same assumptions cannot be made about the way different language speakers' unconscious receptors react to various uses of pitch.

An upward inflection in the English language is used to connote a question in listeners' minds. We learn this from early childhood. When we learnt to read we were taught that. Weren't we? Unconsciously did you hear your voice go upwards as you saw the question mark?

When listeners hear our inflection rising they often assume that we are asking a question or inviting a reply of some kind. So, when we are soliciting calls for talkback or posing a question, we should use rising inflections where appropriate.

There are times when rising inflections are inappropriate. Have you ever heard someone talking who uses an upward inflection? At the end of every sentence? No matter if a question is being asked? Or not? Are they really asking questions? Or has the upward inflection become a habit which is being used in the wrong place?

So what is wrong with that? The problem is that your inflections give your listeners unconscious triggers that indicate you are asking questions, which is contradicted by your words. There is a mismatch between the words and the delivery. Often listeners cannot reconcile this mismatch, and unconsciously seek a hidden message by analysing your inflections. When your inflection plants this sort of doubt in listeners' minds the effectiveness of your message is diluted and undercut by the conflict between the words and the delivery.

Announcers work on all these delivery techniques so that the words and the delivery work together to enhance the message rather than weaken it. It is important that the message is credible.

In the English language a downward inflection, especially at the end of a sentence or paragraph, connotes credibility. That means *I know* what I am saying. Say this sentence to yourself using an upward inflection at the end: 'The news I'm telling you now is really true?' Now say the words using a downward inflection: 'The news I'm telling you now is really true.' Most of us would believe those words if the sentence ends with a downward inflection, but would have trouble believing it if the sentence ended with an upward inflection.

Listen to good newsreaders on radio or TV. Notice that their voices usually go down at the end of stories to emphasise the credibility of news bulletins—newsreaders' inflections trigger that response in your unconscious. If you use these inflections in the right place you have a greater chance of convincing your listeners that you believe what you say and that you have the authority to say it than if your message and inflections are mismatched.

There are times where you need a steady inflection—neither upward nor downward—to keep the listeners' attention. A steady inflection should flow on to the next phrase or sentence smoothly.

As well as using upward and downward inflections at the end of a sentence, you can also use inflections to create emphasis on a particular word that needs to 'jump out' at listeners. To use a change of inflection on an important word makes it assume more importance, and listeners will have received your message as you have intended. By emphasising the right words you can enhance the meaning. If your voice has a tendency to drop into a monotone, varying your inflections will be critical in giving your speech light and shade to keep what you are saying interesting. Using change of inflection on inappropriate words such as 'um', 'eeer', 'aaah' or irrelevant words sounds unprofessional. Listeners do not stay tuned.

None of the above habits are inherently good or bad; it is the way listeners interpret them that makes them so. If listeners get the message you want them to get, it is good. If the message is destroyed because of poor delivery, it is bad. It is not about value judgments, it is about transmitting the message accurately.

Try this exercise to allow you to hear your own range of inflections for yourself:

Hum. Just hum the first note that comes to you. It will be somewhere in your middle range. Listen to the sound of that note in your head. Remember it.

Now put your finger on the bridge of your nose and try to think your voice up into this part of your head. Hum the highest note you can manage. Try and feel the faint vibrations with your finger. Listen to the sound of that note in your head. Remember it. That is the top of your range of pitch. Hum up and down around that note. You may not use it very much but when you need a high inflection, go and grab that note.

Next, rest the palm of your hand on the top part of your chest. Think your voice down to the lower part of your throat and the top part of your chest. If you have ever built speaker boxes you know about how a hollow box resonates the bass notes and enriches their sound. The chest is like a speaker box—if you use it properly, it can resonate to give you the richest sound out of your deeper notes. Now hum as deep a note as you can and try to feel the vibrations down in your chest. That is your deepest inflection. Hum up and down around that note. When you need a deeper downward inflection, go and grab that note.

Projection

Let's now deal with another technique for creating emphasis: projection, or loudness and softness. This technique also relates to your normal speaking voice. Taking your natural on-air speaking voice as the norm, you can add emphasis by making some words 'jump out' by saying them in a louder or softer volume than your average speaking level. This is projection.

Again, by making some words or phrases, or whole sentences, louder or softer you let people know that this is important content. You decide which parts are important and you punch out the word or words.

In normal speech we speak loudly when we are excited about something or when we are addressing a crowd, or perhaps we are trying to convince someone of something. If you want to achieve one of these effects in your listeners' minds use projection on the whole delivery.

Speaking loudly can also trigger other responses. Listeners might believe you consider them stupid and so they might become angry with you or change the radio station. Sometimes you might want listeners to become angry with you, for example to stimulate talkback calls. If that is the case use this technique to achieve it, but if that is not your intention do not overuse it.

In contrast, soft speech triggers a sense of intimacy. Using softer projection during a love-song dedications program, for instance, should enhance the sense of intimacy which the program wants to build.

If you soften your voice in the manner of, 'I'm going to tell you a story' or 'Listen to this interesting gossip', your listeners will respond by listening more intently. When this technique is used in the wrong place your message will be perceived as inappropriate or peculiar.

The word 'projection' is sometimes used in theatre where actors are told to project their voices to the back of the theatre. This is not the kind of projection needed in radio—you would sound impersonal. A mic can pick up the softest and the loudest sounds. Enthusiasm and good control of the range of vocal techniques is important, but the old concept of projection has very little place on a modern radio station.

Multisyllable emphasis

English is a language that uses different emphases on different syllables. Make sure your delivery conveys the correct emphasis. Announcers who punch out emphasis on the wrong syllable do not give listeners the chance to catch the whole word and therefore the meaning is weakened. The same is true in multiple words and phrases.

If you say:

- 🔈 ‘The prize is ten ***thousand*** dollars!’ with the emphasis on the word thousand, listeners may not take notice of the word before the emphasised word and think they can win one thousand dollars.

But if you say:

- 🔈 ‘The prize is ***ten thousand dollars***!’ with the emphasis on all the words that deal with the whole amount of money, listeners are more likely to realise just how valuable the prize is.

When we speak face-to-face we are using 100 per cent communication: facial expressions, body language, and so on. In that instance, even if we get an inflection or a pause wrong, it is usually not a problem because our companion has other communication factors to ‘read’. Take away the visual props and the techniques of verbal communication gain a greater importance.

Understanding

You have to know what you are talking about before you can analyse it and use techniques to deliver it properly. Know what you are going to say before you open the mic.

If your announcing break is scripted, read the script aloud and understand it fully so that you can properly use your choice of techniques to enhance the meaning for listeners. If your break is not scripted there is no problem. The important thing is that it must be *planned*. Some announcers use bullet points, some use single-word reminders, some just think through the structure of their break and deliver it. Whatever your preferred method, the rule is *plan*. If the talk break is not planned, how can you possibly use the right techniques to convey the right meaning—you will not know the meaning or the structure yourself.

Structure your breaks. Think about the meaning you want to convey. Use the appropriate techniques to enhance that meaning.

Phrasing and breathing

Some phrases belong together. A person’s title should be delivered with the same emphasis.

'Steve Ahern, international radio trainer' describes me. It gives my name, it tells you what I do and it tells you where I do it. These three bits of information belong together. If you break up the phrase by using one or more of the techniques discussed above, it may change the sense of my description:

1. 'Steve Ahern/pause/***international radio trainer***' puts more emphasis on what I do.
2. '***Steve Ahern***/pause/international radio trainer' puts more emphasis on who I am.
3. '***Steve Ahern, international radio trainer***' puts equal emphasis on all aspects of my name and title.

Understand what phrases within a sentence belong together and apply your techniques appropriately to keep them together or deliberately break them up to achieve a desired effect.

To be able to phrase properly you must be able to breathe properly. Try this exercise:

Count out loud in a normal volume from number one to whatever number you can get up to in one breath. Yes . . . do it now! Think of nothing else until you have done it. What number did you get up to? Write it down somewhere.

Did you continue to sit or slump in the place where you were reading this book? Did you consciously open up your air passages to make the most of your natural equipment? Did you just speak as you usually do? On radio you need to work all your natural equipment harder than you normally do because the visual aspect of communication is not present. Try another exercise:

Stand up and rest the palms of your hands on your diaphragm, the muscle under your lungs and above your stomach. Consciously use this muscle to breathe deeply and to draw air down to the underused sections in your lungs.

Imagine that your lungs are footballs that have only been three quarters pumped, that the part at the bottom can stretch and hold more air. Imagine that you are stretching the footballs out, forcing them to expand and to draw in more air to fill the vacuum. Use your diaphragm muscle to achieve this. That muscle at the bottom of your lungs can help you expand them to their fullest capacity. What is more, it can also control the rate at which you force out the air. Practise breathing deeply.

The diaphragm is an important muscle for breathing. Strengthen it with exercise and regular diaphragm breathing and you will find that you can use it to make maximum use of your lung capacity and to control the rate at which you exhale. It can be used to control your pausing and projection.

Try it. Take a few diaphragm breaths. If you notice that your shoulders are going up and down, then you are probably not using your diaphragm properly. Your shoulders should be still and the hands on your diaphragm muscle should move in and out. Not your stomach, your diaphragm!

Locate the muscle, consciously force it to open up your lungs more than usual. Now use it to exhale through your mouth quickly, slowly, quickly and slowly. A few more breaths . . . now hold one. Count again now at the same volume as you did before. If you counted higher than the number you originally reached, you have already started to improve your breathing.

Exercise your diaphragm muscle regularly by using it—perhaps while walking to work each day or at a regular time at home. Twenty deep breaths using your diaphragm each day is a good start. Other exercises such as sit-ups or swimming are good for strengthening your abdominal muscles.

Locate your diaphragm, strengthen it, and consciously use it to improve your breathing while you are on air. As your breathing improves, so do all aspects of your delivery. It will help you feel fitter because you will be getting more oxygen into your bloodstream at the same time.

In the studio you probably sit down, automatically constricting your air passages and diaphragm. Consider standing up—some radio stations require it. If not, sit straight in the chair with your back curved naturally. This allows you to sit high in the chair and not to flop into the back of your chair, forcing you to hunch forward.

Jaw, lips and tongue

Just like any athlete, you must warm up your muscles before you use them. If your equipment is not ready you find yourself tripping over your tongue or not moving your lips quickly enough. This is especially important for breakfast announcers whose facial muscles have been at rest all night and may not be in working order to start their shift. Here are a few suggestions to limber up your jaw, lip and tongue muscles.

Jaw

- Chew crusty bread or chewing gum about half an hour before going on air to loosen up your jaw. Do not do it immediately before going on air.
- Tilt your head back, open your mouth and move your bottom jaw from side to side.
- Yawn (perhaps not before a mid-dawn shift!).

Lips

- Blow air out through your closed lips, making them vibrate.
- Move from 'OOO' to 'EEE' and back several times with a feeling of stretching your lips from a round shape to a flat shape.
- Say: 'Pippity, pappity, peppity, poppity, puppity' ten times, making sure that each vowel sound is pronounced correctly and that you say the 't' sound properly and not as a 'd' sound.
- Say: 'Walter was with us when we went away' five times, slowly at first then faster each time.
- Say: 'Unique New York' five times, slowly at first then faster each time.

Tongue

- Stretch your tongue out and waggle it up and down and from side to side for one minute, making sure that it is stretched fully out.
- Open your mouth, keep the tip of your tongue firmly pressed against your bottom teeth and say 'EE-AH . . . ER-AH' ten times. This exercises the middle of your tongue.
- Open your mouth, keep the tip of your tongue still and say 'NG-AH' ten times. This exercises the back of your tongue.
- Say: 'Lilly, lally, lelly, lolly, lully' ten times, making sure that each vowel sound is pronounced properly.
- Say: 'Red leather yellow leather, red lorry yellow lorry' five times, slowly at first then faster each time.

Announcers have a responsibility to keep themselves healthy and to keep their natural speaking equipment in good order. Your body contains the tools of your trade—look after it and keep your tools in good shape.

Other tips

Here are some more tips for keeping your voice in good order:

- Do not smoke.
- Avoid activities that strain your voice. Working in a smoke-filled, noisy restaurant where you have to shout to be heard by the customers is not the ideal way for an announcer to make extra money. Choose another part-time job that will put less strain on your voice.
- Avoid dairy products just before and during a shift as they often clog the sinuses.
- Sip room-temperature water during your shift, rather than hot beverages—the heat and the sugar from tea and coffee can cause excess saliva and tongue-clicking sounds. Iced water can cause muscle constriction. Remember, if you are bringing water into the studio avoid spills into the panel by using a sports-type bottle and placing it on the floor.
- Try this one if you get nervous—tilt your head back and yawn. This opens your jaw and also sends relaxing chemicals around your body, neutralising the adrenaline that builds up through nervousness.

Mic technique

When using a mic there are some points to remember. If used well, a mic can enhance the other vocal techniques discussed.

- Avoid 'popping'. When you say words with plosive sounds in them like 'p' and 'b', there is a chance that the little explosion of air that expires from your mouth can hit the mic too strongly and can cause it to overload, creating a popping kind of sound. To avoid popping point the mic slightly away from the direct line of fire of those plosives and move it a little to the side of your mouth. Try this: put the palm of your hand in front of your face and say 'Peter Piper picked a pack of pickled peppers'. Did you feel the little explosions of air? Now turn your head a little to the side so that it no longer faces the palm of your hand and try it again. This time there are no little explosions of air on your hand. It works the same with the mic.

- Avoid feedback that can occur if your headphones are too loud and you move them too close to the mic.
- Avoid being off-mic unintentionally. Sometimes you *do* want to vary the sound of your voice for effect, but at other times you should keep at roughly the same distance from the mic so that you do not get that hollow 'off-mic' kind of sound.
- Use the proximity effect to your advantage. The closer you move to a mic the deeper your voice sounds—too close and it sounds muffled and distorted, but just right and it enhances your deeper bass tones. As you move away from the mic the bass tones decrease. Listen to your voice at various positions away from the mic and decide where your voice sounds best.
- Sibilance is an over-pronounced 'ssss' sound when you say words with 's' in them. This is usually a teeth-and-tongue problem and voice exercises like 'Sally sells sea shells by the sea shore' can sometimes fix it. If your sibilance is too pronounced you may need to use a mic which can cut the treble frequencies and decrease the sibilance electronically.
- Studio mics usually reject sound at the back of them, so if you use papers that rustle put them behind the mic so that listeners do not hear them.

Remember to use these tips in combination with the other points in this chapter. Good mic technique cannot make up for lack of enthusiasm or poor delivery.

WHAT MAKES A GREAT ANNOUNCER?

The award-winning program director John Brennan has worked in radio for over 50 years as an announcer and as a program director for music and talk formats. These are the qualities he looks for in a radio announcer:

- *Opinions*—this is especially important for news/talk announcers.
- *Wide life experiences*—they make announcers more interesting.
- *Curiosity*—an awareness of the world around them.
- *A range of personality styles*—from serious to light.
- *Emotions*—the best announcers wear their hearts on their sleeves. This can make them difficult to live with at times, but they are worth it.
- *A sense of humour*—and a little mischievousness. Sometimes a bit of weirdness too, that helps them see things differently.

- *Good listening skills.*
- *Good interpersonal skills.*
- *The ability to make a connection with the music*—in music stations the music and the 'jock' have to be tied together emotionally.
- *The ability to sell the music*—to create a magical moment for the listener.
- *A sense of excitement and fun.*

Dean Buchanan is an international programming consultant and was previously Group Program Director of DMG Radio. These characteristics are what he looks for in outstanding FM breakfast presenters:

- *Raw talent*— the magic X factor. They have 'presence'. Someone you really 'hear' rather than someone whose words are wallpaper. And they achieve this without *using any additional words*.
- *24/7 work ethic*—however, the best announcers also have a *life outside of radio*. That is where the great content comes from (living, TV, music, movies, on-line, general knowledge), and they are worldly.
- *Connection*—they understand the emotional connection with listeners. Humour is the default position for most on-air performers, yet some of the most powerful content comes from empathy, sympathy, outrage, shock and intrigue.
- *Great listening skills*—the ability to hear the 'how and why' of what callers and interviewees are saying. They hear more than just the words and respond with intelligent or entertaining follow-ups.
- *Engaging*—they can create content to engage the audience beyond FM, such as online content, social media, video, events and so on.
- *Priorities*—the ability to put their audience and station before themselves.
- *Personal qualities*—a good human being who can be coached. They do not necessarily need a career radio background.

7. PRESENTATION

Steve Ahern and Dave Cameron

To present a radio program effectively you must develop your announcing skills, as discussed in Chapter 6, but there is more to announcing than that. You must also develop the skills necessary to complete your work well and to entertain your listeners, wherever and whenever they are listening.

In this multiplatform media environment where your radio show may be heard in many devices, not just a traditional radio set, it is helpful to think of yourself as an audio content creator rather than just a radio presenter. We will explore this theme more in this chapter (see also Chapter 3) as we look at aspects of presentation for announcers and good radio practices in general.

THE LISTENER: A ONE-TO-ONE RELATIONSHIP

When you are on air the most important person in your life is your listener. Today there are four main reasons for people to listen to the radio:

1. entertainment;
2. access to information;
3. relaxation; and
4. companionship.

In the years since TV began and the transistor made radio portable, more and more people are listening to the radio for companionship and that is why it is so important to develop a one-to-one relationship with your listeners. Think of listeners not as a mass 'audience', but think of them each individually, one person at a time. That is the way to build a personal relationship with your listeners, which is most important in this time when there are so many content choices and fragmenting audience segments.

It is the personal relationship, between announcer and listener, that has helped radio to survive increased competition from other forms of media and that is so important for radio's future. An announcer must achieve a relationship with the listener similar to that which they have with a friend or companion sitting with them in the same room. As radio is now delivered on many platforms, from podcasts to digital radios with picture screens, the content you create and the personal relationship you build with your listeners is more important than ever for retaining them as listeners in the face of so many other media choices.

Talking to the listener

Talk to one person when you speak on radio. Use words that you would use when talking to a friend over a cup of tea, not words you would use when lecturing a class or when performing on stage. Radio is an intimate medium where you become a friend to your listener, so use the language of intimacy and friendship. If you contract pairs of words in normal speech and it does not sound sloppy, do the same on air: 'You will' becomes 'you'll', 'do not' becomes 'don't', for instance.

To test yourself use the 'friend' test. Listen to an item that you have delivered and ask yourself: 'Would I have said that to a friend if I were talking to them in my house or on the phone?' If the answer is 'yes', chances are you are already talking naturally one to one; if not, you need to bring your conversational style with you into the studio.

Another aid that announcers sometimes use is to stick a picture of a special person on the mic stand whom they can see throughout the shift and direct all their comments to.

TARGET LISTENERS AND PROGRAM STRUCTURE

When you arrive at a new station discuss your program with the program director or manager and seek an understanding of your listeners and of the structure of the program clock. Every program has a skeleton that guides it from day to day. The skeleton may be in the form of a clock or of a program run down (see Chapter 16 on programming). Its purpose is to provide you with a general guide as to where segments, music and announcements are placed within the program. Your responsibility as an employee of the station is to follow the program run down. If you do not agree with the structure of the run down or you have found out some more about your listeners that necessitates a change to the format, discuss it with the program director and get agreement before you change anything.

VOICE BREAKS: JUNCTION POINTS

As an announcer within a program you link music, ads, promos and other prerecorded segments with your voice. Every time there is a junction point in a program—where one item finishes and another item joins it—there is a chance for listeners to prick up their ears and give you their attention, or to do the opposite and decide that they do not like what you are doing and turn you off. Junction points heighten your station at the front of listeners' minds for a few seconds while they unconsciously check whether the next thing coming up in the program is worth paying attention to.

At junction points you are at your most vulnerable—if you deliver your link well you keep listeners with you for another three minutes or more as they listen through the song or interview, but if you do it badly you invite them to turn off or cause the station to lose its momentum.

One of the critical ingredients for a well-delivered link is that it eases the transition from one song to another or from the end of an interview to the next item. Use the cue channel to check the beginning and end of songs, not just for their duration but so that you can learn something about that song and match your delivery to it. If the song is fast then as you speak over the fade your speed should match the tempo of the song. As the song finishes you may vary your pace so that it provides a good match with the beginning of the next song. How you use your voice can make the transition between songs much smoother. If the songs do not naturally sit together in their inflections and tempo your voice will separate them enough so the listener is not aware that they did not flow well. You can decide how to approach a voice break by listening to the music tracks on cue.

TIME AND TEMPERATURE

Each station has guidelines about how you should deliver your weather and your time calls. They may seem to be simple things, but they are important bits of information and a chance to get directly into the fabric of the listeners' lives if used well. You need to know how long a brief weather report is going to take you, perhaps three seconds to say 'a fine day today with a top of 25', and how long each time call takes.

Time calls are a trap for beginners. It may seem easy to tell the time, but in a studio where there is so much to do we often do not focus on the clock the minute we look up at it, so we stumble on what should be a simple time call. The best trick for getting on top of time calls is to decide what the time will be in advance. If the song has one minute to go, look up at the clock and determine what the time will be in one minute from now. That gives you the few seconds you need to see the clock, register the time in your brain, and tell your mouth to speak the words. If you think ahead there is no need to stumble again with a time call because the right time is in your head when you need it. You do not have to 'um' and 'er' as you look up to the studio clock. Usually half minutes are not required. If the clock happens to tick over to the next minute as you look up to it, it will only differ by a few seconds. Better to deliver the time call well than fluff your lines because you were trying to recalculate the time as the sweep hand ticked over to the next minute.

STATION IDENTIFICATIONS AND CALL SIGNS

Your station's positioning statement, liners, identifications (IDs) and call sign are essential branding elements. They should not be left to chance. Check how each station identifier is to be said and say it consistently and confidently.

There should never be any excuse for a presenter to mispronounce their call sign or to trip over the words of their positioning statement. These things should roll smoothly off the tongue. They are the crucial identifying elements of your station.

PREPARATION AND AD LIBS

There are five Ps of preparation: prior preparation prevents poor performance!

All your on-air work requires preparation. Some of that preparation might be done before the shift; other parts of it might be done while a song is playing. No matter when you do it you need to prepare, so think through the structure of what you are going to say and make sense of it. If *you* cannot make sense of it neither can listeners.

The best ad libs are prepared! Prepare every break carefully, working out how much time you have in which to deliver your lines and what you want to say when you open the mic. Some announcers use a notebook system where they jot down points or scribble their first and last lines so that they can confidently work their way through what they have to say.

When you are a radio announcer your whole life is devoted to preparation for your show. As you walk along the street or go about your daily activities, you should watch for interesting things to talk about and listen for unusual sounds to comment on or record. Always be thinking about your content. Is that a poster for a circus on that lamp post? Will that hole in the road cause a traffic jam here tomorrow morning?

Commit your observations to paper, not memory. There are too many buttons to push and things to do in the studio to trust your memory to hold one or two small items of possible interest. So use a notebook, voice recorder, electronic organiser or some other system of capturing what you see around you and how you feel about those things. Jot down words that will help you remember colour and smell and anything else to re-create what you saw in a word picture for your listeners. If you felt angry, happy, or sad about what you observed, remember to capture that too so that you can re-create your feelings in your voice when you are talking to your listeners.

There are many sources for show-business gossip and other show-prep items. Use whatever you need to give yourself enough information and background for your program, but remember that good original material is usually more powerful than anything generic available from show-prep sources.

There are many show-prep sites on the internet, for example:

- <www.comedy-wire.com>
- <www.interprep.com>
- <www.megaprep.com>
- <www.radioinfo.com.au>

Or put 'radio + prep' (short for preparation) in your internet search engine to find many other sites.

There are plenty of magazines, street papers, newspapers and journals that cover news and gossip. Use your station's newswire services, too, as they often have a section with quirky stories or stories about famous people that can be useful for content. Be well informed and read as much as you can about everything—you never know when you might need it.

WRITING FOR RADIO

Remember these key points when writing either ad libs, bullet points or community announcements for radio:

- Write for the ear. Whenever you write test it by reading it aloud.
- Test phrases to make sure they do not cause obstructions, and that they flow from point to point.
- Critique your own writing. Be ruthless.
- Think of your listeners and give them a reason to listen to you.
- Write for one listener, not for a crowd.
- Know how you want to end the segment because it will help you get there more efficiently.
- Plan your story. Ask yourself: 'How will I begin so that I grab listeners' attention? What background information is necessary? What will lead the story to its climax? What will sustain interest?'
- Keep the language simple and conversational.
- Use short phrases and short sentences.
- Use whatever punctuation works for you. Standard grammatical punctuation may not be the best method.
- Avoid jargon and clichés.
- Use verbal signposts where necessary to draw listeners' attention to particular points or to change focus from one point to another. For example, 'Now let's look at the news from . . .'.

AUDIO CONTENT CREATION

It is not good enough for a radio presenter to go into the studio and do a show that is disconnected from the listeners. The latest social networking and multiplatform broadcast tools allow you to connect with your listeners in many ways before, during and after your show. Successful radio presenters, such as Austereo Network's top rating drive duo Hamish and Andy, are using all the tools at their disposal to create multiplatform content that gets close to the listeners.

The term 'audio content creation' is a useful way to help presenters think about their redefined role in the multiplatform world of media that exists today.

Audio reminds you about the primary medium you are working in. People want to take audio with them wherever they go, while travelling, working or relaxing. But audio is no longer the only medium for which you must produce content. You need to be connected to your listeners in as many ways as possible and the content you create for the many platforms you will deliver your service on will need to include text and pictures as well as audio, although the primary delivery platform will remain audio.

Content reminds you about what you create. Good content still follows all the rules about good production values, engaging listeners and giving useful information, but content has now expanded into vision and text. Radio presenters who want long term careers will need to build skills in photography, graphic design and skillful writing, as well as their primary skills in audio.

Creation reminds you that we are in showbiz. The creative process is and will continue to be important to make sure that whatever you present is entertaining and engaging for your consumers.

Austereo's Network Head of Content for the Today network, Dave Cameron, says Hamish and Andy's national success comes from connecting to listeners through multiplatform content and good old fashioned entertainment values. In an interview with radioinfo he explained the key factors of their success:

> *As an on-air radio team, what makes Hamish and Andy sound so engaging and draws audiences to them?*
> The show's success will be dissected and over-analysed a lot in years to come, but it's quite simple for us. Raw honesty and silliness between mates making each other laugh, combined with complete input and direction from listeners on everything we do, every day.
>
> Listeners are never treated as just listeners in this show; they are a major part of the direction of the show every day. The show is and has always been 'the people's show', and the content has always been driven by listeners.
>
> The show takes its people on daily escapism adventures, whether it's making a KFC bucket spin again, driving a caravan across Australia, or sailing a tall ship across Bass Strait. If there's ever a decision to be made on air, we always hold a family meeting with our listeners.
>
> *How many media platforms are they on?*
> FM, Digital, Online, Mobile, Podcast, TV, Press, CDs, and more to come.
>
> *Is being seen and heard everywhere important for the success of any radio team these days?*
> Lots of different elements like TV and press are helpful initially to build profile, but it's not about just being seen. It's about hard work and showcasing the best of your content and talents every time the spotlight is on. Just getting in lots of party pics in back pages of papers doesn't build a loyal following, and it's also a delicate balance ongoing to avoid overexposure of any brand.

Most importantly, however, as a lot of Hamish and Andy's radio content is now incredibly visual, we have a philosophy and an engine room to turn around show content to be online as quickly as possible. Generally you can see what you just heard pretty instantly, and our listeners now expect that. That's the 'being seen and heard' that we like!

Hamish and Andy, and almost all other Austereo personality shows, have put a lot of work into podcasts. Is podcasting important for success in radio these days?
It's just another way we can let people discover our shows in their own time, but like anything when you build a following you better live up to their expectation every single day. We get nailed by our subscribers if our podcasts are ten minutes late in going up! But we take that anger seriously. Podcasting is critical in this day and age; you must make it easy for people to become loyal followers even when they can't catch the show.

They also have a social networking presence. How important is that connection with the audience?
Critical, but we never ever abuse our followers or friends on our social sites by bombarding them with relentless pushes back to the show. We communicate with them, we get ideas from them, we keep them in touch with what we're thinking of doing, and we make sure we're always updating the sites.

The People's Show is about connecting with its people every day, and our social networking followers are no less important than our daily listeners.

Do your listeners contribute much information via social networking that Austereo presenters then use as content for their shows?
Yes, absolutely. Facebook is the major one for us, however, just as many people come to us directly to communicate at hamishandandy.com.

What advice would you give to aspiring radio announcers about building their profile on new media platforms?
Be original, be unique; we don't want cookie-cutter jocks any more. That's not what future radio content is all about.

Expose yourself and your talents as much as you can, and have a hard-work ethic. Hamish and Andy worked for free for a year on Fox late nights simply because they were super passionate.

Radio is more than just playing songs, more than just running contests, and those stations and companies that haven't invested in shows, raw talent, or developing content-rich online sites have completely missed the point about what radio is now all about.

INTERACTION

Radio was the first interactive medium, using telephones to allow callers to interact live with programs as they were broadcast. The era of digital convergence is now introducing new methods of direct interaction with listeners.

Announcers must be just as comfortable with the internet, text messaging, online chat programs, internet audio, messenger programs, internet telephony, online polls, social networking and email as they are with telephones. These devices all give you the direct listener contact access you need to make your program relevant to listeners in the 21st century. Digital radio takes these interactive opportunities even further as announcers receive picture and text files from listeners and broadcast them to the screens on listeners' digital radios.

KNOW YOUR EQUIPMENT

Be aware of the main components of each studio in which you work and ensure that you can drive the system efficiently. Know what the effects of soft or loud levels are on your desk and transmitter. Know how to solve simple problems and when to seek advice from a technician. Respect your equipment and keep it clean and in good functioning order, and if problems do occur keep the program going without discussing the problem on air if possible (see Chapter 4 for more about studio equipment).

ENTHUSIASM

Whatever the brief of the program, embrace your shift enthusiastically. Listeners should hear your enthusiasm through the mic every time you open it.

INTERVIEWS

Some programs incorporate interviews. If you have interviews in your program you must seek to understand as much as possible about the topic, so that you can do the best interview possible. It is not enough, for example, to just read the press release about a product. Think about the topic, research it a little, ask some questions about it. Research from credible sources, not from second-hand reports. Find out as much as you can about what you will be talking about, so that you are coming from a background of knowledge when you ask your questions (see Chapter 8, Interviewing).

AUTOMATION, VOICE-TRACKING AND NETWORKING

Using automation systems, you can prerecord a program and have the computer play it back on air later. The technology works by integrating your prerecorded voice segments with the music, ads and promos that are already in the hard disk and merging them with the program log for replay at the correct time (see Chapter 4). Some of the same considerations also apply to other methods of time shifting discussed in the next section.

As it is possible to voice-track a shift in between doing other things, the shift can sometimes sound disjointed or ill-prepared. It is your responsibility to ensure that your voice-tracked shift is as good as a live-to-air shift. Program directors are looking for announcers who can efficiently capture the enthusiasm and energy they have in a live shift for their voice-tracked shifts. Simply back-announcing a list of songs and doing a station ID is not good enough; make your voice-tracked shift as real as possible within the limits of your program brief.

A voice-tracked shift does not have to sound generic. You should make the program as local as possible, referring to the fete that you went to yesterday or to the concert coming up this weekend, and using other show prep techniques just as you would in a live shift.

The other method of replacing live announcers is by networking. If a station wants to sound local it usually chooses voice-tracking over a networked program, but there are times when a networked program can benefit the station. A station may take a networked program for economic reasons, so if a networked program is cheaper or more profitable the station will consider that option. Another reason for choosing to broadcast a networked program could be to take the pressure off staff members who might already be voice-tracking at least one other shift each week on a supplementary AM or FM station. The third reason for networking is often the most compelling. If a station can get a higher quality program with a higher profile announcer for the same cost as hiring a junior announcer it may be better for the station to go with the option of increased quality to satisfy listeners and to bring in more advertising.

TIME AND PLACE SHIFTING

Podcasting and audio downloading are highly successful methods of delivering your program to listeners at other times and places when and where they are more able to listen intently to the audio content you have created. These methods are energising older, longer program formats and giving advertisers and presenters access to audiences long after the live program has finished. Audio streaming is also a common method of audio delivery on the internet. Although this method allows 'place shifting', it does not necessarily allow 'time shifting' as audio streams are designed to be delivered live in real time. Podcasted and downloaded files can also contain pictures and text, as well as audio, creating new opportunities to embed more information and enhanced forms of advertising into time and place shifted programs.

Because listeners now play closer attention to your content, make sure it is well planned, executed and edited. It may not be enough just to put your whole program on the internet without some extra work. Ask yourself:

- Will the joke still get a laugh the third time it is heard?
- Does the content have rich meaning that will deliver more when listened to a second time or in another country?
- If there are time, date or place references will they still make sense when heard in another country six months from now? Perhaps they should be modified or edited out, or an explanation should be added at the beginning of the show to set the scene for anyone who listens after the event.

These are important questions to consider when your program is delivered in a new form at some later date.

MUSIC

If you are working at a commercial station the music is probably scheduled, and there will be little flexibility for you to change your playlist because it has been researched and targeted to various mainstream demographics. If that is the case, follow it as required and make it sound as if you have handpicked every track because they are your favourites.

ABC Radio also has a playlist, but announcers have some freedom to play tracks that equate with special topics or interviews. On some ABC Radio networks the music is often secondary to the talk content, so it is essential that each track on an ABC playlist stands alone and has musical merit of some kind that the announcer can highlight. ABC talk announcers should ensure they are familiar enough with the music they play to say something meaningful about it.

In community radio music policy varies from station to station. In some stations there is no consistent policy and announcers can choose all their own music. In other stations a general sound is aimed for, and in yet other stations the music is formatted as in commercial stations.

Whichever community station you belong to, the most important thing is to never forget your listeners. Always test the music you are playing by asking yourself: 'Is it the right mix for my listeners? Will they like that?' Playing only your favourite music might not please everybody.

There are times when you dislike the music you are playing; never let it show unless there is some special feature segment that requires you to 'trash' a song. Remember the song is someone's favourite, so if you criticise it or fade it out early you may lose a listener and alienate a part of your audience.

If it is station policy to begin a program with theme music do so, but make sure that the theme is not too long and that you choose an appropriate in-point a few seconds into the theme which is on the beat and at a time when the energy level complements your opening delivery.

COMMUNITY ANNOUNCEMENTS

Whatever your role in the radio industry you are a part of your community. The closer you get to your community the better radio you make and the more appreciative your listeners are. Respect the community's events and use radio to help promote them.

Community announcements should be written to be read in an organised, conversational style. There has to be room to ad lib around a topic, but not so much room that vital information is lost.

'Who, what, when, where and why' should all be elements in each community announcement. Telephone numbers and other contact details may be given, or listeners might be referred to a central telephone number or internet site if they want specific information about the event after they have heard about it on air. As you deliver a community announcement punch out the key words with extra emphasis so that listeners who are interested in that topic are alerted to the content.

If you are writing community announcements try to flag who you are talking to and what the announcement is about in the first sentence. Avoid intros like 'The local council invites you to attend . . .'. The local council is not as important to your listeners as the event itself. Lead with the details of the event and mention the council a little later in the announcement, if necessary. Omit irrelevancies and provide important details succinctly and efficiently, and perhaps even add some comments of your own if permitted.

Some community announcements are limited. How can you make the ninth fete this month or the weekly meeting of the needlepoint association sound special? If you find that you are having trouble locating an interesting angle consider listing various events together by the day that they are on or by the type of event, or pruning the information so that you can come to the point quickly and move on.

SCRIPT MECHANICS

Punctuation is not essential when writing your own scripts. Use whatever method works best for you. Some points to remember about scripts:

- Use double-spaced printed scripts where possible, not stapled because they will make noise when you turn the pages.
- Use a clean and simple typeface large enough for you to read easily, such as Arial.
- Use capital letters to highlight unusual names or unexpected words that require more attention. It will make you more aware of them as you are reading the copy.
- If a word is hard to pronounce write a phonetic version in brackets after it, for example, 'The composer DVORAK [dvaw–ZHARK] was 40 years old when he wrote this . . .'.
- Keep your copy neat and clean. If changes have to be made ensure they are done neatly.

Some people use a forced line-break method, where each line contains a section of the script that belongs together and the next line marks a change of delivery or a place for a pause. For example, a community service announcement (CSA) or ad may be written like this:

CSA—HOSPITAL OPEN DAY—16 June
Ever wondered what it's like
behind the scenes at the hospital emergency ward?
There's no need to wonder any more
because the local hospital is having an open day.
You'll be able to see how the wards and emergency sections work,
and the doctors and nurses will be on hand to tell you about everything.
It's all part of fundraising for a new piece of equipment for the children's cancer ward.
Get along to the local hospital's open day
This Sunday from noon
in High Street, Rivertown.

Or you may prefer to mark your copy with lines and arrows to help you raise or lower your voice when required and pause in appropriate places. For example:

When you want to pause put a stroke in the copy. / When you want to pause longer put in two strokes. // When you want your voice to go up put an up arrow under↑the word. When you want your voice to go down put a dropping line under the word. If you want to remind yourself to give the same emphasis to a whole phrase put a straight line under it.

SCRIPT TIMING

With practice you develop an accurate sense of timing for copy. You get to know how many words fit into a given length of time at your reading speed. Depending on what you are writing, this guide may be helpful:

- A reading rate (aloud) of 160 to 180 words per minute is about average.
- A single line in average-size type should last about three to four seconds.
- A double-spaced A4 page (27 lines, about 270 words) lasts about 90 seconds.
- Thirty seconds should contain about 70–75 words.
- Sixty seconds should contain about 120 words (fewer words than for 30 seconds because more breath pauses are often required in a longer piece).
- ABC newsreading speed is about three words per second.

THE MIC

Learn to use the mic without popping and without sounding either too hollow or too close. Vary your voice to achieve the desired effects and move closer or further from the mic if you need to. Know the type of mic you are using and its pick-up patterns (see Chapter 4). Smile into the mic—it is amazing how much more warmth a smile can give your voice.

LEVELS

You should always know the optimum levels for your equipment and keep all the inputs at the right level mix of volumes to generate the best program. Too much level from the music and you drown your voice; too little and it sounds as if it is not there.

Eventually you know instinctively when your levels need adjustment and your fingers go to the correct faders and make the change automatically. Once this happens you can start to add the subtleties which make the program flow better. It is a bit like playing a piano—you can learn to read the notes on a sheet of music and play them in a few hours, but until you know the music and the notes instinctively your fingers can never interpret the piece with any emotion.

AIRCHECKING

Regular airchecking improves your performance. Record yourself at least once a week and listen with a critical ear a few days later. Try to find one or two points that need work and focus on them for the next week until you have improved that part of your delivery. Seek regular critiques from your program director—ask for 30 minutes to be put aside to play and discuss some of your program. The critique should contain a mix of good points and ones that need improvement. Ask advice, then go away and think about that advice and try to put it into practice. It is to your advantage to do so.

People you know either flatter you or cut you down a few notches, so their advice will be biased. If you find an objective listener not too close to you by all means seek that advice, or seek other professional advice. Advice from an amateur listener often throws you off the track.

MISTAKES

Half your listeners notice mistakes, the other half do not. If you draw attention to a mistake or try to turn it into a joke *all* your listeners will know what you have done. If the mistake is significant a brief apology is all that is required, then move on. If the mistake is insignificant let it pass without comment.

There are times when your confidence is low and something in the shift causes you to go down into a negative spiral. The best way to avoid this is to prepare well and to do your voice warm-ups, so that things go well. If you are in a spiral you have to discipline yourself to move beyond it.

Limit your scope to three items: What is on now? What is coming next? What is after that? If something does not fit into these three elements it is either too early to think about it or too late to think about it. Forget it. Limit yourself to the immediate. Forget what went on earlier and ignore what is still to come. Give your full attention to the most important things that are happening at this very moment.

The same theory applies to forward promotions—think a few minutes ahead, but avoid promising listeners something scheduled for an hour ahead that may be out of their reach to hear.

TIPS FOR WARMING UP BEFORE A SHIFT

- As you drive to work try singing with the radio, announcing along with the announcer or reciting some of the tongue twister exercises from Chapter 6. This is as good a way as any to warm up the voice.
- Play music that is bright—this also helps you get into the right psychological mood. The right frame of mind is crucial to a good airshift. 'Vibing' yourself up is crucial to your on-air delivery. If you arrive at work having said little and you are in a flat, silent frame of mind, it is difficult to haul yourself up to speed on air.
- At intersections, describe aloud exactly what you see as you sit—this is excellent ad lib practice and it stimulates the mind. Do this only for the duration of the red light and make sure you describe as much of the action as you can in a given time.
- If you do not have any red lights, use part of the journey to describe what you are seeing.

SOME USEFUL NO-NOES

- *Do not* play around with the fact you have fluffed a word—quickly correct the mistake, or ignore it and keep going.
- *Do not* call attention to an error in live copy. This reflects on your station and is of no entertainment value.
- *Do not* talk with other announcers or reporters who might be in the studio with you unless there is a clear purpose for the conversation. This sort of off-mic exchange when on air sounds self-indulgent.
- *Do not* be critical or talk down about any artist or song.
- *Do not* overtalk. Any ad lib is more effective if it is succinct.
- *Do not* ever violate any format point. Respect the program guidelines. Understand the format; know exactly what is expected of you and do it. Be the personality that you are, within the confines of the program format.

PROFESSIONALISM

In professional radio stations, employees are expected to:

- arrive in time to prepare and to present their shifts;
- give their full attention to their shifts while on air, not use the

time to make telephone calls or to do other things unrelated to their work;
- perform other activities for the station such as promotions, prerecordings or voice-overs as required;
- present an image in their personal lives that is not against the image of the station;
- act ethically with listeners, clients and their employers; and
- avoid problems with other staff or with management.

In return professional radio staff can expect to:

- be free of exploitation;
- be respected as a professional;
- be paid a fair wage;
- be supported in their efforts to better their shifts;
- be coached and advised about how to improve their performance; and
- be told of the expectations on them and the measures by which they will be judged.

In Australia the radio industry is small. Act professionally and your good name will help you to progress. You may have to move around and seek new opportunities because many stations are too small to do much about staff development or pay rises. Your professionalism will be your biggest asset.

USEFUL WEBSITES

<www.comedy-wire.com>
<www.interprep.com>
<www.megaprep.com>
<www.radioinfo.com.au>

8. INTERVIEWING

Jen Oldershaw
and Lucienne Joy

When discussing the significance of being interviewed on radio, one of Australia's longest serving Prime Ministers, John Howard, gave ABC 774's Jon Faine an insightful response about the power of radio:

> 'Jon, I'm sure you think when I come in here to your studio that you think I'm coming in here to talk to you. But, in fact, if you'll excuse me, I'm not. I'm coming in here to talk to your audience. As long as people have an audience, I will talk to them.'

Interviewing is one of the fundamental skills of radio presentation and the content of an interview can be very influential, as former Prime Minister Howard acknowledged. As one of the staples of radio content, it is inevitable that at some stage during the course of your radio career you will find yourself conducting an interview, whether it be a quick chat with a local band for community radio, getting a news grab at a press conference, doing vox pops on the street for an FM music station or conducting a current affairs interview for a metropolitan news/talk station.

As listeners we hear interviews everywhere: in news, documentaries, feature packages, vox pops, question and answers (Q&As) between presenter and reporter, celebrity chats—even talkback is a series of short interviews.

Although it seems that nothing could be more straightforward than an interview—where you sit someone in front of a mic and ask questions until you run out of questions or time—there is much more to it than that. Good interviews are crafted as a result of understanding the skills involved, good preparation and experience.

Some broadcasters find the role of interviewer a perfectly natural one to adopt. The inherently curious, quick and persistent will take to interviewing with enthusiasm. Others find it a more daunting and challenging task to draw out and capture quality content live on air or prerecorded. Yet for both types of broadcasters, a strong understanding of the techniques and craft involved in good interviewing will make the task a lot more enjoyable and deliver better on-air results for the listener.

Great interviewers always have their audience in mind. The role of the interviewer is to act as an intermediary between the guest and the audience, asking the questions they would if they had the chance. In your preparation you will have done research and written questions on topics your audience might be interested in but not necessarily aware of. Beyond this there is also an expectation you will react appropriately when your guest says something that needs to be challenged, clarified or explored further.

The best interviewers put their guests in the spotlight for the duration of the interview and play a backseat role, allowing the guest's experiences and opinions to dominate. Many broadcasters make the mistake of thinking a good interview is like a conversation. Great interviews can be *conversational*, but even in the more relaxed magazine-style interview the focus of attention should be on the guest. Geraldine Doogue believes that an interview is a '*disciplined* conversation, not just a laissez faire, let-it-all-hang-out-chat'. Your role is to direct the conversation, to constantly probe, encourage, query, challenge and generally draw out the person on mic.

A good radio interview can make riveting listening. As Andrew Denton, one of Australia's most recognised interviewers, says, 'Unlike TV, people often forget they're in public on radio and this can lead to some great moments.' Here are some of the fundamental things to take into account to maximise your chances of creating your own 'great moments'.

CRAFTING THE INTERVIEW

Radio presenters conduct interviews to:

- collect information;
- allow a guest to express an opinion or explain a situation;

- interpret, analyse or place an event in context;
- call someone to account for their behaviour or position on a subject;
- entertain or provide insight into someone's personality; and
- delve into the personal or sensitive side of a story.

Once the reason for the interview is clear, the way you approach it will be dependent on what style of program it will be heard on, whether it be a:

- news and current affairs program;
- local FM-style breakfast show;
- locally focused community radio program;
- specialist talk program or documentary;
- late night talkback show; or
- morning magazine program.

Taking the different program formats into account will allow you to determine what type of interview you will do, the angle to choose and how long the interview will run.

News interviews

Generally speaking news interviews are considered 'hard' interviews; that is, they are concerned with the hard quantifiable facts of a story. The purpose of a news interview is for collecting information, specifically, the 'who, what, when and where' of a story.

News reporters might also ask a question to confirm the mood of a story or search for a reaction (e.g. 'Do you have anything to say to your victims?'). Either way, questions for news interviews are usually concise, to the point and geared around the main angle.

In news reporting you will be unlikely to include the actual question in your news report. You will ask fewer closed and more open-ended questions such as 'What happened when the fire started?' or 'How is the fire progressing?' rather than 'How many fire trucks are on the scene?' A one-word answer won't be very useful in the final cut. Depending on the length of the news grab you may even edit two responses together, but the focus is on drawing out the interviewee to get as much raw description and colour as possible.

As news is focused on what is happening *now*, questions need to be framed in such a way as to get the clearest facts or points of view available at the time. The opportunity for analysis will come later—the news journalist will have little time to conduct long interviews, instead their role is to continually provide the most accurate and up-to-date information available.

Journalists will work to tight deadlines—usually filing for an hourly bulletin, but in the case of a big story they will file a number of times an hour—so having a clear understanding of how to ask a straight question to get a useful 30-second grab is essential. News interviews are commonly recorded either on location, at press conferences, as quick 'phoner' responses in the news room or on the site of a story such as a bushfire or demonstration.

Current affairs interviews

Hard current affairs interviews are generally longer than news interviews and as a result can dig deeper into a story. Usually around five to six minutes in length, they are often conducted in response to a current news story. A current affairs interview will focus on analysis, accountability, interpretation, explanation or justification of an event, policy or action. Subsequently, 'why', 'what if', 'what now' and 'how did this happen' questions will dominate.

Softer current affairs interviews are approached in a similar way. While not as driven by the news of the day, they still seek to clarify and probe a current issue that will interest or affect the audience. For example, water desalination is an ongoing current affairs issue in Australia as we struggle with reoccurring droughts and floods. On days where the topic isn't part of the news cycle you can choose to approach it from any number of relevant and interesting angles.

In both types of current affairs interviews we can divide questions into 'head' and 'heart' questions. Head questions are more analytical, based on facts and opinions. Heart questions focus on a more personal response, often the more emotional or sensitive side of a story. If we ask a new state opposition leader *why* they wanted the top job we'll likely get an answer about policy, leadership and the electorate. Ask them how they *feel* about realising a personal goal and the answer will inevitably be more personal.

Generally speaking, current affairs interviews will pose more head questions but, posed correctly, the heart questions can sometimes be the most revealing.

Magazine interviews

It is with magazine or chat interviews that the combination of head and heart questions will be more balanced. A magazine interview sits within a program full of mixed content, often known as a magazine program. Interviews for such music or chat programs are often considered 'soft', but that doesn't always make them easy interviews as anyone who has interviewed difficult and uncooperative celebrities will attest. Often they will include elements of current affairs, seeking facts and background information. But the aim of a magazine interview is to entertain as well as inform, which is achieved by encouraging the interviewee to recount personal experiences, adventures, thoughts or ideas so the listener can get an insight into their personality.

As magazine interviews are as much about emotions and personality as facts and opinions, the relationship between interviewer and guest is crucial to the success of the interview. Establishing a rapport early on will encourage the guest to be relaxed and open. As magazine interviews are usually focused on a guest's area of expertise—their new book, film or study—it is important that the questions show an understanding of their work and that you approach the chat with genuine interest, even if you have to feign it a little!

Chat interviews can run longer than current affairs interviews, but again it is important that the conversation is a disciplined one that ends before the guest ceases to be interesting and/or entertaining. The challenge often for the interviewer is to prevent the guest from 'overtalking' and to keep the interview on track.

Specialist interviews

These can include interviews for documentaries or for specialist programs with talk content. Documentary interviews will often be prerecorded for later editing and as such have the luxury of being longer with a wide focus that can delve into all possible aspects of the story, sometimes from a number of different angles. As it is often only in the editing process that the shape of the documentary becomes clear, having more content to work with rather than less is an advantage. Good preparation is crucial for documentary interviews to be successful. Your ability to follow up answers appropriately will depend on the quality of your earlier research.

Similarly, specialist interviews distinguish themselves from magazine interviews as they have licence to assume a more narrow scope of inquiry. For example, if you had Kylie Minogue in for a general magazine interview it would be a different interview than one for a specialist program on surviving breast cancer.

Other common types of interviews

Vox pops

Taken from the Latin vox populi or 'voice of the people', vox pops are the edited result of taking to the streets and asking a number of different people one or possibly two common questions. They are used to create a verbal snapshot of the mood of the people on a particular topic. As with any sampling that only uses a small number of respondents combined with the ability to skew the response in the editing room, the results are hardly accurate but they can be a fun and quick way to use listeners on air to create a sense of mood or reaction to a chosen subject. Remember to balance a number of voices, genders, accents and ages to give the impression that you have talked to a wide cross-section of people. Edit tightly so you can fit as many comments as possible into a one- or two-minute piece.

Q&A

Question-and-answer sessions are short interviews of usually three to five questions that take advantage of radio's immediacy. Regular occurrences on talk radio programs, Q&As are live interviews between a presenter and reporter, usually in the field. The content is generally predetermined by the producer and reporter just prior to the Q&A and will reflect the information the reporter has been able to gather in the immediate period before going to air. Whether it is a 'hard' or 'soft' interview will depend on whether the reporter is at a siege or the Royal Easter Show.

Talkback

Even chats with talkback callers can be considered interviews. If the listener is responding to a call-out for an opinion or experience, guiding them through their comments on air is the responsibility of the presenter. Depending on whether the topic is light or serious, asking questions to elicit the caller's thoughts or clarify their point requires similar techniques to those used in either magazine or current affairs interviews, the only difference being that you do not have the advantage of prior research about the person you are interviewing.

PREPARATION

No matter what the program, purpose and length of the interview, or whether it is prerecorded or live, the key to an interesting and effective interview is preparation. Preparation can be broken into three parts:

1. research;
2. organisation;
3. and writing.

Research

The beginning of this process will involve choosing a topic to interest or inform your audience, then the most appropriate approach and angle to take during the interview needs to be considered. If you decide you want to do an interview on arts funding, do you approach it from the perspective of the artist, the galleries or the funding body? If you decide on the artist, do you interview a struggling writer who needs funding or a successful painter who doesn't need it but receives it anyway?

In choosing your talent you will need to find someone that:

- knows the subject well enough to answer the questions;
- has the authority and credibility to speak on the topic;
- can explain or describe the subject in an entertaining way;
- has a genuine interest and knowledge of the subject;
- can appeal to both the listeners' curiosity and emotions; and
- is easy on the ear, not monosyllabic or longwinded.

As you work through the process you will need to research what has been written about this subject. What are the main angles in the story and on what points do people disagree? Do you need two people to tell the complete story from both angles? Will there be elements of conflict?

One of the best ways to research your interview is to have a preliminary chat with your guest over the phone. This can provide important insight into what they'll have to say on the subject, where they have less knowledge and how they'll perform on air. Also, it gives the guest a preview of your line of questioning and an opportunity to clarify their thoughts before going to air (see Chapter 9 for more on research and production).

Having a strong general knowledge is essential if you choose to pursue a career in news or current affairs. If you work on a live program, you will often have to react very quickly to a story with the knowledge and facts you have at hand. Being a current affairs interviewer is a lifestyle, not just a job, and requires that you consciously keep up to date with the events and newsmakers of the day, from overseas wars to local petrol prices, world leaders to reality TV stars.

Having said that, you do not need to become an *expert* on everything. Never pretend you know everything about a topic. No matter how much research you do, your interviewee will almost always know more than you do—and some of your audience will as well.

2UE's Paul Murray says: 'Experts know more than you will ever read, so don't try to pretend that you are in their league. Ask the normal questions you would of anyone who knows more than you. Find out how things work, and why they work that way. The best interviews are done by people just trying to figure something out.'

Organisation

In preparing the interview you will need to pay close attention to detail when arranging the logistics to make certain it goes smoothly both on and off air.

Many guests are unused to being on radio and making them feel comfortable with the process will ensure a better performance on air. When you call to arrange an interview clearly explain the type of program they will be appearing on, who will be interviewing them and the audience they will be speaking to. A guest will prepare for an interview on ABC Radio National in a significantly different way to a commercial FM breakfast show.

Ensure they know where to go and the time the interview is to go to air. Send an email to confirm and follow up the day before if it has been arranged well in advance. If the interview is scheduled on air at 10.30, ask them to be at the studio by 10.15 and ring or SMS them to check they are on the way. This way you can get them settled with coffee in hand well before air time, and it allows you to plan your show more effectively knowing your guest is ready and waiting to go.

Let them know the general line of questioning, and run them through a couple of your main angles. Some guests will ask for the questions to be sent to them in advance, but avoid this where possible as your guest will script their answers in reply and the interview could end up like a couple of actors reading lines. If they are insistent, giving the guest the first question is often enough to ease their nerves. Unfortunately, some celebrities will only agree to interviews if they can vet the questions first, so there may be times when you need to compromise to get the talent you are seeking.

Interviews can take place either live or prerecorded in these ways:

- on the phone;
- on location; or
- in the studio.

Phone

If you are organising an interview by phone, arrange to call the guest yourself and avoid relying on them to call you at a specified time. Interviewees rarely understand the tight windows of time available during live programs. Try and get two numbers to call as there is nothing more frustrating than getting voicemail when you have 60 seconds to find your talent.

Calling a landline number is preferable as you don't run the risk of the signal dropping out or the mobile phone battery dying mid-interview. If you must call a mobile, check how much battery they have—it helps to know this if you will be keeping them on hold for any length of time. If they are on the road, encourage them to pull over and put the phone to their ear (the line is often stronger without the hands-free unit) and make the audio environment as silent as possible by winding up windows or getting to a quiet spot. This is as much for their ability to hear you down the line as it is about getting a good-quality line to air.

Try to call about 10–15 minutes before the appointed air time to check in with your guest. This gives you time to either find them if they don't answer or to reorganise the program if they can't be located.

On location

Guests will not always be able to come to you and often a more sound option is to go to them. From their location you may report live using a mobile phone or combined recorder/phone device, or you may prerecord for replay later.

Recording interviews on location can provide wonderful ambience that adds realism to your chat, but be aware of extraneous noises that detract from the actual interview and the extra time a location interview can take.

If you are doing a prerecorded interview on battery egg farming, hundreds of clucking chickens will place your listener in the barn right next to you. However, if a plane flies overhead feel free to ask your interviewee to either stop for a moment or repeat their previous comment after it has passed. You will thank yourself for this as you edit the interview later. Similarly, be aware of the challenge it is to edit around loud background noise—if music is playing in the background of your interview, as you edit the voice the music will also be edited and a song may jump all over the place, giving the final product a disjointed sound.

When you are reporting live from locations you will often not have the luxury of stopping the interview, but it is a good idea to explain the source of extraneous noises, especially if they enhance the content of the story.

On-location interviews mean the interviewee is more likely to be in their comfort zone, either in their home or place of work where they are less prone to feeling nervous. Choose your location carefully. Unless you specifically need to record in a room with hard, bright surfaces, try to choose a room with soft furnishings like carpet and curtains as they absorb the echo in the room and give you a better quality audio signal. Record with headphones on to monitor ambient noise as well as the guest's voice level. Check your recording device occasionally to be sure it is still running and recording. Check you have enough recording time left on your disc, and your batteries are still charged.

Be confident as you position yourself near your interviewee, even if it means asking them to move from behind their desk. Sitting at an angle or opposite will encourage a more natural conversation and means you will be close enough to extend the mic to their mouth without having to reach. Try to find something to rest your arm on if you can; it's guaranteed to get sore after a few questions. Change hands when you need to, being careful not to generate mic noise by too much movement. Begin by asking the interviewee to record their name and title—it will save you trying to find the scrap of paper you wrote it on when you get back to the studio and will ensure correct pronunciation.

Here are some other location tips and issues to be addressed:

- Always, always check your equipment before you leave.
- Do a test and listen back in the headphones.
- Is the recording level appropriate?
- How close will you hold the mic to your guest to get a good level without popping?
- Does the lead or mic connection crackle?
- Have you got the right mic for the job?
- Take spare batteries, a power source and extra audio storage drives, cards, or USB sticks.
- Take a notebook and pen and labels for your discs or drives.

Make *absolutely* sure you know how your recording equipment works. It sounds obvious, but sitting on 5th Avenue in New York belatedly reading the recorder's manual after realising in horror I'd recorded over a crucial interview for a documentary, I can attest that tricky technology can catch out even experienced interviewers.

In the studio

The studio will be a foreign environment for many interviewees. Your job is to make them feel as comfortable as possible. Be in control right from the start. Indicate the chair behind the mic you want them to sit on. Show them how to use the mic and demonstrate a couple of hand signals you might use during the interview that will either guide them a couple of centimetres closer or further back if needed.

Let them know how long it will be before they go to air and explain what you are doing. For example, tell them: 'At the end of this song I've got two ads then I'll introduce you.' Tell them how long the interview is likely to be and whether they should expect to be involved in talkback or not. If they aren't taking listener calls they don't need to wear headphones—for the uninitiated hearing their own voice amplified can be quite off putting—but give them the option anyway.

Try not to talk with them too much immediately before going to air as this can diminish the interview's spontaneity. Some guests feel that when they have told a story off air saying it again is repeating it and they self-censor, even if the listeners haven't heard it the first time. Use this time instead for some last-minute clarifications, checking name pronunciations or relaxed small talk.

If your interviewee is more experienced or arrogant, the gentle approach needs to be replaced with a confident and in-control one. Adopt a businesslike but friendly approach. It is *your* studio. *You* are in control. Most guests will expect that and respect you for it.

A few other things to be aware of during the interview:

- Ask the guest to turn their mobile off—it is amazing how often their friends will ring during the interview to tell them they're on the radio.
- If a guest is wearing noisy jewellery, particularly bangles, ask them politely if they might remove them.
- If the interviewee is a pen tapper or a table thumper, motion politely for them to stop as it will be picked up by the mics and prove distracting.
- Encourage them to stay on mic and not move in and out of its pick-up range.
- Inform your guest that the microphones will be live when the red studio light is on.
- Always have a glass of water for your interviewee.
- Make sure the interviewee knows your name. It sounds obvious, but some guests will do a dozen interviews in a day and will simply forget it, or mistake you for the producer who has been dealing with them in preparation for the interview.

Writing Intros And Questions

Depending on the style of interview, you can plan its shape. Interviews should have a beginning, middle and an end. Andrew Denton says that you should 'plan the interview as a logical progression to try to cover what's interesting to your audience, but also to get the interviewee to inadvertently reveal something about themselves'.

So, you have a guest, a topic and a head full of questions. Where do you start? Terry Lane of ABC Radio National believes that the introduction and the first question are vital. 'An interviewer has 14 seconds to grab the listener's attention. Therefore the introduction is important and the first question is critical.'

Always prepare an introduction to an interview—even if it is a one-line bread-and-butter intro, such as 'The Academy Awards are on tonight and here with a preview is our celebrity reporter in LA, Amanda Jones'. Introductions provide important context and currency for the listener. If a guest just appears from nowhere without a proper introduction it would be like a stranger joining the table at a dinner party without any introduction from the host. In the time it takes to piece together who they are and why they're there, confusion reigns and some listeners will give up trying to follow things entirely.

A simple introduction for a radio interview can be broken down into three main parts:

1. introduce the topic;
2. explain and/or background the topic; and
3. introduce the guest.

Introduce the topic

This is where you spark the interest of your audience and make it relevant to their life or experience. Aim to answer your listener's questions: 'Why should I listen to this?' and 'Why am I hearing this today?' Try to be creative; great radio writers will explore many different ways to approach a topic other than the obvious.

Explain the topic

Here you can go into more detail about the subject, perhaps explaining some background or further context. In a straightforward interview this can be one line—for a more complex story you may take more lines to explain the subject fully, but be careful not to overload your listeners with too much information at this point. Clear and concise writing will allow your listener to quickly and clearly understand what they are about to hear.

Introduce the guest

Finish the introduction with the guest's title and name and, if necessary, explain their relevance to the topic. This provides a crucial context for the listener, who needs to know why this particular person has been chosen to speak. Avoid continuing the intro after you have introduced the guest as your listener will quickly forget *who* the actual guest is.

Mike Carlton has a valuable tip: 'Write down the name, title and occupation of your interviewee and have it before you. Believe me, there's nothing worse than a sudden mental block which can leave you without those crucial details.' As anyone who's ever forgotten their partner's name when introducing them to a colleague knows, these mental blocks are truly embarrassing. At the top of your introduction, have those details clearly written out for easy access.

Questions

The major part of your preparation is working out what questions to ask. One effective way to approach this is to think about what you want from your guest during the interview. Having a clear idea of your objectives will help keep you and the interview on track. Remember the main angles you have chosen to follow and work out the most logical flow for the interview as you incorporate both head and heart questions. Preempting your guest's answers will also help you order your questions, even if you need to change your plan once they start to speak.

Andrew Denton says: 'Prepare well, then be prepared to throw it all out the window if something more interesting is said.' Mike Carlton agrees: 'Work on your questions, making sure you are prepared to head off in different directions.'

Write your questions down. Even if you are confident with your questions they will be a handy backup if your mind goes blank live on air. Writing questions out beforehand also helps you to collate your thoughts and phrase the questions clearly before you go to air. If you want to sound less rehearsed try writing bullet points—but write something because it then allows you to think about your delivery as well as the content.

The basic components of an interview are the key questioning words: who, what, why, when, where, how and what if? One simple interview template can work like this:

Q 1 Main angle
Q 2 Follow-up to Q1 answer—you can potentially preempt what your guest might say here, but it is crucial to listen to find out the best point to follow up.

Q 3 Main angle again
Q 4 Personal question on the topic
Q 5 Follow-up to Q4 answer
Q 6 Second angle
Q 7 Follow-up to Q6 answer
Q 8 Third angle or another follow-up
Q 9 Draw to a close
Q10 Final wrap question

This template can work for both current affairs and magazine-style interviews, and can be shortened or extended depending on the subject or guest. It is only a starting point and you should aim to eventually develop your own individual questioning style.

The first question is the most important. Don't slow the momentum of a good intro by wasting the first couple of questions on pleasantries. Your listener is smart enough to know that you will have asked them how they are today off air when they first arrived. The first question will set the tone for the interview and should directly relate to the content you have foreshadowed in the introduction. If there is one main, glaringly obvious angle to cover, don't build up to it over a series of questions; this will only frustrate the listener and confuse the guest. Get to the point as quickly as possible to allow appropriate time to follow up and explore other issues.

The valuable tip here is to *listen*. This is the most important skill in good interviewing. There will be many things competing for your attention during an interview—nerves, your producer, time, your equipment, your presentation style, the plane overhead drowning out your interviewee, and many other things. A good interviewer will be able to keep listening to what the guest is actually saying despite any number of distractions. Your audience will be unaware of most of the things you are dealing with during an interview, so they will be surprised if you follow a politician's unexpected retirement announcement with a question about when a new major road project will be finished.

Paul Murray warns of interviewers not paying attention and pursuing a single-minded agenda:

> An all too common trap for announcers is they turn interviews with prominent people in the news that day into grab factories where they don't listen to what's being said and just keep asking the same question in the hope the answers cause a controversy. You must listen to what they are saying and search for the deeper meaning in what's being said.

As a general rule avoid writing questions that will elicit a yes/no answer. Closed questions will not invite the guest to elaborate or tell a story. Questions that begin with 'how' or 'why' will encourage a more detailed answer. Sometimes, however, a question that demands a yes/no answer is very powerful: 'Do you admit now that you should have told the public?' Just be prepared to follow up with a 'why' or 'how'.

Double-barrelled questions should either be split into two distinct questions or the stronger one chosen. For example: 'What was the best thing about working with that director and how did you find filming in Morocco?' Both questions may be worth asking but putting them together guarantees only one will be addressed—usually the latter.

Know *why* you are asking the question. Have some idea of the response you're after so you can rephrase or re-ask your inquiry if your guest sidesteps the question or doesn't understand it.

Avoid asking a guest to simply agree with a statement of yours. Instead of: 'Public transport is a joke, isn't it?' you could try: 'Why is public transport in chaos at the moment?' or 'What's going wrong with public transport right now?'

Similarly, be wary of giving your guest limited options to choose from in their answer, for example asking: 'Is your favourite type of music jazz or classical?' could be too narrow an option for a dance music lover, but they will feel obliged to go with one of your options. Let them answer questions in their own words.

Writing questions out will mean you can get the question right the first time. It detracts from your confident delivery if you have to rephrase questions constantly. In your preparation try varying the length of your questions. Sometimes a preface to a question can provide important information or context. If all your questions are short it can end up sounding like an interrogation rather than an interview.

THE INTERVIEW

After you have researched, organised, written up your interview, settled and introduced the interviewee and asked the first question, you are now faced with the most important part of your job—*listening*.

It is crucial that you tune in and actively listen to what the interviewee is saying. This goes beyond simply being aware that your guest is speaking and waiting for a pause in which to ask the next question. To listen effectively means actually *hearing* and *comprehending* the words being spoken. Only then will you be able to respond appropriately.

If you are thinking of your next question or any of the dozen things vying for your attention during an interview, you can miss valuable opportunities such as the answer that screams out for a follow-up question or requires clarification, challenging or elaboration.

2GB's Alan Jones says listening pays respect to your guest or caller, and can also yield good content. 'The first element is being able to listen, given that in talk radio you're inviting people to ring . . . They're people who are informed and they've got a view about things. It's important to hear that view.'

Indicate to your guest that you are listening by using non-verbal cues. Cutting in with a series of words like 'yeah . . . really? . . . wow . . . okay . . . mmm' will be distracting to your listener. You can easily show your interest by nodding or smiling with facial expressions that express some meaning. Feel free to laugh if something is funny and react as your listener might because those natural cues we use in daily interaction apply equally in the interview situation.

You might want to warn your guest that even though at times you could look away to check your questions, put in a CD or write a note, you will still be listening. Return your attention to them as quickly as you can.

Dealing with the guest on air

Be confident enough to deviate from your questions if the guest raises an unexpected issue worth exploring, but keep control of the interview at all times. Some guests will be longwinded, some will say much less and require constant drawing out; whatever the situation, be prepared to work at keeping the flow of the interview on track. Don't feel you cannot interrupt an overly chatty guest or repeat a question to an evasive one. But the same rule applies as in normal social interaction—be polite and friendly but firm.

In news interviews Russell Powell warns:

> You will be dealing with two different types of talent—the experienced interviewee and the person on the street, such as a witness to an event. In interviewing the experienced person the challenge is to keep them on track and on subject. With witnesses you aim to get a fresh response, and that's usually the first one you get. Try to record that first contact with them so that you capture their immediate reaction.

In a live studio environment non-verbal cues like raising your eyebrows, opening your mouth as if to speak or even raising a finger indicating you want to interrupt are useful tools to manage an interview. If these don't work, get ready to interject when they take a breath or finish a thought. Often phrases like 'I'd just like to jump in here and follow up something you said a moment ago . . .' or 'Bill, we don't have much time left, can you very briefly explain . . .' will help you break in.

In the early days it can seem rude to interrupt the flow of a guest's thoughts or badger them for an answer to an important question, yet you will be doing the wrong thing by your audience to let a guest become equivocal or longwinded. They will be expecting you to grab the reins and steer the interview into interesting territory.

Similarly, if a guest is replying in monosyllables your job is to follow up with a 'why' or 'how' question that will encourage a longer answer. Many people in politics, showbiz, sport and business these days are media trained. On the positive side this means guests are often aware of what we are looking for as interviewers and understand the performance aspect of being an interesting guest. On the downside, particularly with politicians, this means they spend much of the time being guarded with their answers and are less likely to deviate from the message they wish to convey.

If you feel your interviewee is being evasive, repeat the question from another angle. Try approaching a 'head' question from a 'heart' perspective. Sometimes resisting the urge to jump in straight away with another question will force the guest to fill the silence with a further comment. It's an uncomfortable but effective technique.

Having a difficult or aggressive guest does not mean you need to be aggressive in return. A professional, dispassionate approach coupled with good preparation and homework will often pay off better for the interviewer. A shouting match may create dramatic radio but in the end it is unpleasant listening and rarely leads anywhere. However, in hard news and current affairs strong and persistent questioning is sometimes warranted. If the interviewee continues to be evasive you may need to let the audience know you are aware of their evasiveness but cannot do more to get them to answer, so you are moving on. For example: 'I have asked this question several times now and you've avoided answering it, so let's move on to . . .'

Mike Carlton describes the ideal interviewing style as 'amiable'. Interviewees deserve your courtesy even if you find them obnoxious or their opinions loathsome. You are there to allow the audience to make up their own mind, not to try and convert or shout down your guest.

How long should an interview be?

There are no hard and fast rules to this, other than to provide the best quality content possible for the listener.

In a live situation, be aware of how long the interview has been running. Generally speaking, a four- to six-minute interview is appropriate for a live program, but of course this will change depending on your interviewee. If you have the Dalai Lama in for a live discussion you would have barely got started at the six-minute mark, but a local market report could be covered in two minutes. If you feel there is sufficient interesting territory still to cover but your format requires some music, break for a song then reintroduce your guest and continue. You can also reintroduce the guest by name at regular intervals, especially if the interview is a long one. This will give those who have just tuned in a chance to catch up with who is speaking.

If you are prerecording your interview, think about how long the final product will be and record enough to cover it and a little more to allow you choice in the editing room. For a six-minute interview, aim to record around ten minutes worth of material. Any more than that and you will be making some hard decisions during editing and may be tempted to go too long.

Be disciplined when editing and remember the listener will not judge the interview on what's missing from it, only on what they actually hear.

A documentary or feature interview is slightly different as the focus is on covering all the subjects you need. If the interview has been going for a long time and your interviewee is starting to get tired, take a break for a minute to let them relax and perhaps to chat through what you intend to discuss next before moving on (see also Chapter 17 on features).

QUALITIES OF A GOOD INTERVIEWER

An interviewer needs confidence and self-possession. If you are self-assured and confident your interviewee will be much more likely to relax and perform well, or in the case of an experienced interviewee it will reduce the chances they will try and take control or overtalk.

The best interviewers are curious—those willing to put aside their own ego and opinions and focus on what a guest has to say. If you give the genuine impression that you are interested they will be more likely to open up and talk. Sometimes you will have to search to find something of interest in even the driest subject or a connection with the dullest guest, but if *you* sound bored the guest will not enjoy the experience and neither will the listener. Conversely, if the guest is a personal hero you will have to stay poised and resist the urge to be self-indulgent.

A good general knowledge across a range of areas will be a valuable asset for any interviewer. Keep up to date on not only the news and current affairs of the day but celebrity gossip, music, film, pop culture and sport. Many a presenter has been caught out when sport moves from the back page to the front page and they have little context in which to place the story.

Great interviewers are often voracious readers of both fiction and nonfiction. In a world as constantly changing as ours, it is a valuable exercise to go back and read the history of long-running stories such as the origins of conflict in the Middle East or the White Australia Policy. Just as useful is getting acquainted with those classic books and films that are often referenced in conversation.

Have a healthy ego and do not be afraid to ask a 'dumb' question. If you are unsure about something your guest has said it is certain many of your listeners will be too. Sometimes the most obvious questions are not asked because of the assumption (often wrong) that *everyone* knows the answer. As an interviewer, your role is to ask the questions your audience can't, even if you feel a little self-conscious doing so.

Good interviewers are professional, but have the courage to ask the difficult or left-field questions. As an interviewer you are in a privileged position, one that allows you to ask things that in normal circumstances would seem rude, outrageous or simply inappropriate.

2UE's Paul Murray understands the unique position he has as a broadcaster with a microphone and a curious mind:

> I asked John Howard if he had a business card once. I was just interested to know if the bloke with the most to brag about in this country handed out a little card like everyone else who seems important. He did—it simply said John Howard, Prime Minister.

Interviewing can be as challenging as it can be exhilarating. But it is those 'great moments'—when you find strangers opening up and revealing their most private thoughts, or when you get a surprise admission or a straight answer from a prime minister—that make interviewing one of the most satisfying aspects of making radio.

USEFUL RESOURCES

The Open Learning series 'Lifelong Learning–Cultures of Journalism' at <www.abc.net.au/rn/learning/lifelong/features/journalism/default.htm> has several useful episodes on interviewing and reporting.

9. PRODUCING

Steve Ahern

The role of the researcher and the producer in radio is to support the radio presenter and to supply the program with content that is important and relevant to listeners.

The duties of researchers and producers are varied. At one end of the scale high-level journalistic and editorial judgments are required; at the other end you'll be making coffee and taking messages. Different program formats require different kinds of research and production.

The techniques dealt with here are useful to all styles of programs, but some are used more for one style than another. There are stylistic differences between the various sectors of the Australian radio industry. There are also stylistic differences between programs at different timeslots on the same station. The ABC, SBS and community radio often make use of current affairs block-style programming, characterised by programs such as the ABC's *AM*, *The World Today* and *PM*, and SBS Radio's *World View* or community radio's *The Wire*. This type of program usually does not contain music and is rarely personality driven. The main focus of current affairs block programs are the stories themselves. These programs take the news agenda and use the longer style current affairs timeslot to add analysis, interpretation and argument to the news stories of the day.

Another style, often used in commercial news/talk radio, is the personality-driven talkback format. This format depends on the relationship between a personality presenter and the listeners. The news of the day sets the agenda, but the program also includes elements of entertainment, opinion, music and personality that would not fit within a current affairs block program format. Alan Jones and Jason Morrison on 2GB, Sandy Aloisi and John Stanley on 2UE, Neil Mitchell on 3AW, Howard Sattler of 6PR and Bob Francis on 5AA are all exponents of this format on commercial radio. ABC Local Radio interviewers such as ABC 774 Melbourne's Jon Faine and ABC 702 Sydney's Richard Glover are required to take a more balanced approach than their commercial counterparts, but their style also requires significant interplay between their personality and the guest.

Whether a program is light or heavy in its approach, whether it has talkback elements or personality presentation, the same fundamental skills for researching and producing that program are used.

WHERE DO THE IDEAS COME FROM?

When you work in news/talk or current affairs formats, coming up with good ideas every day to fill many hours of programming is often the most difficult task. Where do the ideas come from?

Ideas come from other stations, TV, newspapers, the person next door, anonymous tipsters, disgruntled employees, internet sites, blogs, wire services and many other sources. Some, like newspapers or TV, are secondary sources. Someone else has digested the story and presented it to you. Others, like the disgruntled employee, a blog or a tipster, can yield primary sources. Because current affairs radio is such a voracious medium, consuming hundreds of stories a day, you need to use as many sources as you can get.

If you use a secondary source make sure that you verify the details of the story before running with it, because in the end you are responsible for what went to air on your station, not the newspaper or the internet site from which you source the original story. Secondary sources such as newspapers, TV bulletins and other radio stations' bulletins are important because they yield information about the daily news agenda and steer you towards the stories that everyone is talking about. Remember that when you use secondary sources someone else has already covered the story so you have two choices on how to approach it:

1. Summarise what has already been covered and perhaps go further by seeking listener reaction to it.
2. Look for a follow-up to the story or perhaps find new talent with a different point of view.

If you deal with primary sources you have the chance to get something that no one has and to lead the news agenda. It can sometimes be tempting to just take what someone tells you at face value in your eagerness for a story. While primary sources often yield great scoops, they can also get you into trouble if the source is biased or there is another side to the story of which you are not aware. Check the credibility of primary sources well before you run with a story. If the story comes from a blog or website verify the credibility of the site before proceeding.

The best ideas are often drawn from your own life. If something interests you and you are in the same demographic as your target listeners, chances are the story is of interest to them too. Similarly, observations from your daily life often make the most riveting radio stories, so instead of blindly following the day's news agenda remember first to look around your own environment and see if there are any good stories that have not made the news yet, stories that reflect a slice of life that might interest your listeners as well as you. Observations from daily life can include fetes, fairs and circuses coming to town, roadworks in a key part of your locality, local meetings, local sports events and anything that might affect the way you live your life or do your business. Any of these things could lead you to an interesting person, passionate about a particular subject. That kind of person is known as good talent and provides engaging content in news/talk formats.

The daily news agenda has to take a high priority when you prepare material for news/talk or current affairs programs. Newswire services and original documents from credible internet sources can supply important information. Credible internet sources are usually sites where an editorial checking process has been applied, rather than sites which only reflect a single personal viewpoint. Press releases are also a good source of ideas, so make sure your program is signed up to receive releases from organisations with information to give to your listeners.

To be valuable as a current affairs producer you need a contact book full of names and direct telephone numbers of newsmakers and good talkers because you need to contact people quickly when stories break and when you are trying to fill a program. Telephone books, internet directories, online encyclopaedias, Facebook, Myspace, LinkedIn and local business indexes all contain information about people you might want to contact. In your contact book leave space for comments about the person as talent, as to whether they speak well, are experts on particular topics, are punctual or are always arriving late, and so on—these extra details help to remind you who will be the most appropriate person to speak on air.

CHOOSING TOPICS

Once you have your ideas, how do you decide what goes to air? To answer that question you need information about the station's listeners and when they are listening. You need further audience research to find out what interests listeners. Listeners to a youth station are interested in very different topics from listeners to a 40-plus news/talk station. Once you have gathered a large list of topics and discussed them with your program colleagues, discard stories that are unlikely to interest your listeners and rank the remaining ones. Forget the rules about dinner-party conversation etiquette. In news/talk radio, current affairs topics include politics and religion as well as law and order issues, education, and the myriad other things that affect us in our everyday lives. Be aware that too much of any one thing may be a turn-off for your listeners, and ensure there is a mixture of voices within the program. Is everybody on the telephone or are some people in the studio? Is there a good balance of female and male voices? If you find the mix is not balanced, then in choosing your topics you may have to consider the texture of the program along with the news values of each story.

RESEARCHING THE TOPIC

Once you have decided on your topic you have to find the talent and research the story. The time that you spend doing this on each story depends on the program's deadlines.

If you have received a press release from an organisation suggesting a topic that you might like to cover in your program it is important to check other sources and think about whether there might be any conflicting opinions about it. With press releases, request background materials from the originating organisation if they have not sent that initially.

Always check the facts of news stories from other sources and also search for opposing or contrary opinions. The research process should lead the producer to a thorough understanding of the main issues. From there the producer can decide which angles to follow and which angles to highlight. Armed with the knowledge that their research has provided, the producer can also judge what is the main angle and whether secondary angles are worth pursuing or not.

Most radio stories focus on one main angle. Be aware of secondary angles, but you may choose to cover only one in the time you have. This is not the case with programs such as *Late Night Live* or *Background Briefing* (ABC Radio National) where one or two topics consume the whole program. In these programs there is time and scope to cover more of the intricacies of a topic, and an in-depth exploration of a topic is part of the program's brief.

Good producers have a number of sources to which they can refer to check facts and points of view. Each telephone call in the research process should deliver another angle and another point of view. They should all be jotted down and followed through, so that a complete picture emerges before the interview takes place.

Since much of a radio researcher's work is done via the telephone, efficient producers and researchers always have a notebook and pen or open computer contact file by their phone and they use it to keep their notes together, rather than putting notes on single pieces of paper that can be lost or mixed up with other notes. One of the most frustrating things in researching a topic is not being able to get hold of people on the phone. Some producers use a system of incoming and outgoing phone numbers, so that when people call back to follow up they can more easily get through.

Once the research on a topic is complete there is, hopefully, time to discuss the angles and the information gained with other members of the team. From there the talent is chosen and questions are written.

SELECTING AND PREPARING TALENT

'Good talent' is a person who speaks well, is knowledgeable and informative about their subject, and has authority to speak about it. During the research process when you call people seeking different points of view on the topic, jot down how well they speak and how knowledgeable they are on their subject with a view to having them on the program once the interview is decided upon. When evaluating whether someone is good talent ask yourself the following questions:

- Does the person speak intelligibly?
- Is the person knowledgeable about the subject and authorised to talk about it?
- Is the person enthusiastic about the subject?

If the person has these attributes it is likely that you have good talent. It will make it even more interesting to the listeners if your talent has:

- the ability to create word pictures;
- examples to illustrate points;
- passion for the subject—anger, fear, joy, excitement;
- willingness to engage on a number of different levels;

- the ability to analyse the situation from a range of perspectives;
- an historical understanding of the issue; and
- the ability to defend the position presented under pressure.

Once you have selected your talent it is important to prepare them so that both of you do well in the interview. If your talent is unprepared and sounds hesitant and boring, listeners will lose interest. Make sure you provide information about your program and your listeners, and confirm the nature of the interview and its expected length. Explain that in news 'we only want very brief answers', or 'in this style of magazine program we are looking for about ten minutes', or 'we want to explore these aspects'. If you want your talent to tell stories, to engage in debate, to become angry, excited or happy, tell the person of your expectations. When you prepare talent well you have better interviews. Make sure you:

- indicate the time for the interview;
- explain the topics to be covered in the interview;
- provide some brief information about the program and the interviewer; and
- ask the talent to listen to the program if they have not heard it before and if there is time before the interview.

Always pay attention to detail during the preparation stage. It saves you difficulties when you are live to air. Check the following with your talent:

- Will you be at this telephone number when I call?
- Is this a direct telephone number or do I go through a switchboard or assistant? If so, please let them know I will be calling.
- Will you keep the line free a few minutes before and after the time we expect to call?
- Is there another landline or mobile number that can be used just in case?
- Do you have some flexibility if we have to reschedule because of other breaking stories?
- Is this the correct title and pronunciation of your name?

Provide your talent with tips that improve the sound quality of the interview:

- Speak directly into the mouthpiece of the telephone, and don't use a speakerphone.

- Turn your radio off when we call.
- Avoid background noise, but if that is not possible find out what it is so that the interviewer can later explain it to listeners.
- If on a mobile phone find a quiet location or stop the car to talk.

It is the producer's job to make the talent feel at ease and to support the announcer. If a producer has done a good job preparing the talent and warming them up, then the announcer's job is made much easier. If the talent is coming into the studio the producer should chat to them before they go into the on-air studio to make them feel comfortable in the studio environment. This brief chat before going on air can often reveal another piece of important information that you might have missed in the preparation stage. If the talent is new to radio the producer should suggest where they should sit and how far they need to be from the mic. Feeling uneasy in the studio or with the program disadvantages the talent and means they will be a far less effective speaker. Take a little trouble to make the people who give their time to speak on your program feel as important as the announcer. People who feel comfortable will be happy to appear on the program again, otherwise you are unlikely to have them back.

The question often arises as to whether you should tell the talent what your questions will be. The talent needs to know the general line of questioning and also, in many cases, the first question, so that the focus is on beginning the interview in a confident and coherent manner. It is usually not desirable to give all the questions in advance. Circumstances might change; the questioning might go down another track once the person is in the studio, or the interviewee may overplan their responses and stifle spontaneity. You need some flexibility.

WRITING INTRODUCTIONS AND QUESTIONS

Once you have researched the topic and selected the talent, next come the questions. Some announcers like to write their own introductions and questions after the producer gives them a research brief. Others are happy for members of their production team to write introductions and questions. There is no set formula for writing introductions and questions, but a few major aspects need to be considered.

Think about the mixture of 'heart' and 'head' content. If the interview is light and personality driven there may be more emotion and personal content. If the interview is more about ideas, perhaps discussing politics or history, the questions need to be more hard-edged. A good interview balances heart and head elements.

An interview for a hard current affairs program has more head content, dealing with politics, conflict and points of view. An interview with a music performer probably has more heart content, covering inspirations for songs, how they feel during a performance, their life. Many interviews fall in the middle of both the heart and head categories. A performer who sings about social and political topics would hold opinions on the state of the economy and the country's politics, as well as have thoughts and feelings about performance or inspiration, so when interviewing such a person the style of questioning could change within the interview.

The rule of thumb for writing questions is to choose the main angle and begin with that and during the interview briefly move across to questions in the other category. Return to the main angle as you close the interview. Write only enough questions for the time allowed in the interview. If you overwrite the questions the interview can be prolonged or go to areas where your research has shown there is little productive benefit.

In writing the introduction have the questions that follow in your mind already. It is often useful to write the introduction and the back-announcement after you have formulated the questions and the path they are to take. In your introduction you have the choice to give a lot of information or to give a little. If you choose a short introduction style, details about the person whom you are interviewing plus a short introduction to the topic are usually enough. (See also Chapter 8, Interviewing.)

A script with a short introduction might look like the transcript below:

Hillary Hazzard
Head of Hazzard Incorporated

Live telephone interview at 0945
08 8899 8899
(alternate tel: 08 8899 8800)

It's tax time again, and this year there are a lot of changes to the tax system that could cause trouble with your return if you don't understand how to deal with them. Hillary Hazzard is a tax expert who knows all about the changes.

Hello, Hillary . . .

Notice the person's name and contact details on the top of the page, plus the time of the interview. It is helpful to include these details here so that during the pressure of the live-to-air program they jump out easily from the page when you need them.

The introduction does not go into great detail about the background to the tax changes or the interviewee's qualifications. The tax matter is probably a well-known running issue and most listeners are probably aware it is time for them to complete their returns, so a few words would trigger existing knowledge without having to labour the point in the introduction. The questions would go on to explore various issues in more depth and the back-announcement would mention Ms Hazzard's name again and give details of her company and any relevant contact details.

If this issue were new there might be a need for a longer introduction putting it in an historical or news context, such as:

Hillary Hazzard
Head of Hazzard Incorporated

Live telephone interview at 0945
08 8899 8899
(alternate tel: 08 8899 8800)

You may have heard the Treasurer discuss new changes to our tax system in parliament last week. Well, they've been rushed through and will come into force this tax year.

The haste of the changes has caught some politicians by surprise and the Treasurer has been criticised this week for the way these new measures have been introduced. But what will it all mean for us taxpayers?

It will mean that we have to approach our tax returns in a whole new way. Some of the changes will affect deductions, others will affect the way company cars are taxed. The tax threshold has also been reviewed and taxpayers on average incomes can expect to pay more tax this year.

It's all a bit too confusing for me, so I've asked the head of Hazzard Incorporated to help me make sense of it all. Hazzard Incorporated is an international tax firm with experience of this kind of taxation system in many countries. The managing director of Hazzard Incorporated is Hillary Hazzard.

Hello, Hillary . . .

In the second example you can see the extra historical and political detail that has been added to set the scene for the listeners. Ms Hazzard's full title is included, as well as an explanation for why the program has chosen to interview her rather than someone else.

Both scripts are written with the listeners in mind. The speech is conversational, and words are contracted and structured as close as possible to normal speech. The scripts are written as though the announcer is talking with a listener who has an interest in taxation issues.

WRITING EDITORIALS AND PRERECORDED SEGMENTS

There are other forms of writing that you may be called on to produce. Humorous comments, scripted intros to prerecorded segments and editorials may all be required as part of the rich tapestry that makes up a radio program.

An editorial that leads into a talkback segment should contain information about the facts of the topic, plus some emotive words and a call to action for listeners to take part in the talkback that follows. Writing editorials is discussed further in Chapter 13.

When writing introductions for prerecorded segments it is important to make them feel as close to the announcer's style as possible, so in general they should be written in conversational language even though they may contain bits of formal information that relate to the content of the prerecorded piece. A script for a prerecorded segment should also contain details of how long the segment duration is ('Dur:') and what the first ('Beg:') and last words ('End:') are. It may also have one or two other end cues where the segment can finish earlier if there is time pressure—these are often called early opt outs and can be referred to as 'snaps' or 'early opts'. The details on a script could look like this:

Beg: 'Amidst the hail of bullets today . . .'
End: '. . . hampering reporting from this war zone.'
Dur: 3 min. 25 sec.
Opt: at 2 min. 51 sec. '. . . in the dead calm of the deserted capital'.

This would be followed by a back-announcement ('B/A') that should serve just as well for the early opt as for the full duration. It might look like this:

B/A That was William Trent in the troubled area of Eastern Europe. You'll hear more reports on the developing situation with that conflict here on this station throughout the day.

Notice that the back-announcement gave the reporter's name. If the reporter's name had been given at the end of the report another wording would have had to be used. Notice that the reporter said the words 'reporting from this war zone' as the last words, so it would have been inappropriate to repeat the same wording in the back-announcement. Guard against the temptation to echo words in the report; listeners do not like it. Find another way of saying the same thing or leave it out altogether.

THE TEAM

As a producer you need to know exactly what your role is in the program team. You might be working with only an announcer presenter, or there may be other people in the team as well such as an assistant producer or researcher. When you first join the team spend some time discussing your role with the team members and clarifying expectations, otherwise you will find yourself in the pressure of a live program without clearly knowing who should be doing what. As part of your job you may be expected to:

- provide research notes and track down people on the telephone;
- contribute questions and introductions;
- suggest story ideas (or will you be limited to following up what the others in the team have decided upon?);
- prompt the announcer through the intercom or through prompts on a computer screen.

You may also want to check certain points with other team members, such as:

- Do we use signs like 'wind-up', making a circle in the air; 'stretch', making a stretching motion with your hands; and 'cut', motion of cutting your throat with your forefinger, in our team? What exactly does each sign mean in this team?
- How much detail is required for each talkback caller?
- When are the pressured times for the announcer? And for the other researchers and producers?

LIVE STUDIO PRODUCTION

When the program is on air the researcher and producer roles switch from preparation to live production. The skills for producing a live show include maintaining calm under pressure and the ability to make quick decisions and follow through.

When the announcer is ensconced behind the soundproof glass you are the announcer's eyes and ears. You must know if a story is breaking or if traffic is at a standstill, and be the informant so the announcer has all the information needed to tell the listeners. Without your contact line to the outside world the announcer and the program can give the impression of being out of touch.

If there are regular checks to be done with traffic-monitoring agencies or service bodies, make sure they are carried out and the information is communicated. Even if there is nothing new to tell the listeners it is still important that you assure the announcer you have checked and that there is no change in the situation.

The announcer needs feedback about how long an interview has been going or when a prerecorded interview will finish. Warn them when the ad break is coming to an end or when there is 60 or 30 seconds to time-out before the news.

And if the announcer loses the script in the jumble of papers on the desk or cannot think of a next question, the producer has to be there with something to offer as a prompt. Some announcers like to formulate all their questions themselves; others prefer all or some questions to be suggested to them on the prompt screen. Find out which way your announcer operates and always be ready with a question or a line to contribute.

As producer you are also required to give the announcer feedback about how long an interview should continue, whether it is getting boring, or whether the main topic has been sufficiently covered. Little gestures like a thumbs up, a smile or a nod help to communicate that you thought the interview went well.

A producer's role is to help the announcer sound as good as possible on air. This is the most important thing a researcher or producer can do, and is why you are there.

Every day the announcer's intelligence and ego are exposed to potential criticism from thousands of listeners. No wonder there is pressure. Your job as a researcher or producer is to do the best you can to minimise that pressure by being organised and prepared. You must anticipate problems before they happen and prevent them. You must always support your announcer while on air and do anything that is required for the announcer to perform well. If there are problems discuss them after a shift, never while the program is on air.

PRODUCTION 2.0

As the convergence of radio, TV and the internet break down the boundaries between each medium, producers are finding themselves with more to do during their live-production time and after the program. This is the new reality for program teams and you must develop new skills to be able to do all that is required of you in the current multimedia age.

If your radio program has an internet page you can expect to be adding pictures and text to the page as the program is in progress. If the announcer talks about a picture they will want to refer listeners to the picture on the station's website, rather than to a newspaper. After the show you might update the page with names of competition winners and references to books or events discussed in the program. You may also load sound files of 'best of' moments from the program and edit a podcast of the show for uploading to iTunes.

While the show is on air you need to be familiar with blogs and chat-room programs, messenger, SMS, email and online headline sites such as Twitter to increase the amount of incoming sources available to you. You also need to be internet literate so you can search for sources as the program is in progress and be able to interact with listeners in cyberspace via social networking sites like Facebook and Twitter.

Digital radio producers will be required to edit and insert weather briefs, names of competition winners or details of interview subjects and topics. Text insertion software is simple to use, but ensure accuracy in typing and spelling because what you write will be seen by listeners on their radio screens and will be considered as important program associated content.

SAMPLE SCRIPTS

These sample scripts show you how different programs write their scripts.

An introduction and script of a prerecorded report from ABC Radio's PM Program on an always current topic—interest rates

COMPERE: Borrowers can't say they weren't warned. Only last week the governor of the Reserve bank was on breakfast TV telling people that low rates wouldn't last forever. Today the bank lifted the cash rate again. It now stands at 4.25 per cent. The RBA has hiked the official interest rates after five of its last six board meetings.

It's the buoyant housing market and booming mining sector that have convinced the Reserve to act. And there are no signs that the increases are at an end. There have been warnings, too, that more families are in financial stress, trapped in a vicious cycle of borrowing more so that they can keep spending.

With this report, our economics correspondent, Stephen Long.

[Sound of diesel engine]

STEPHEN LONG: The sound of a diesel engine hauling ore from a mine, a familiar scene in the mining districts where the boom is back. With the global recession easing and China going gangbusters, demand is solid and commodity prices are soaring.

So the terms of trade, the difference between what the nation pays for imports and gains for its exports, has shifted decisively in Australia's favour. That's boosting investment, lifting national income and raising output even as fiscal and monetary stimulus wane. And that was a key reason why the Reserve Bank decided to lift the cash rate again.

CRAIG JAMES: If there's one thing that stands out in the statement today, it's the focus on the terms of trade.

STEPHEN LONG: Craig James, the chief economist at Commsec.

CRAIG JAMES: Australia's terms of trade are rising, adding to incomes and fostering a build up of investment in the resources sector.

STEPHEN LONG: That's a direct quote from the statement by the Reserve Bank governor explaining the reasons for the rate hike. At Westpac, chief economist Bill Evans was also struck by this new emphasis.

BILL EVANS: The change in the emphasis in the statement is to give more emphasis to the terms of trade, to the rise in commodity prices, the stimulus that's going to give the economy and also a lingering concern about house prices.

STEPHEN LONG: House prices have continued to rise, despite a succession of interest rate increases. Speaking to the masses by the medium of Seven's *Sunrise* show last week, the central bank chief, Glenn Stevens, aired his concerns about real estate prices.

GLENN STEVENS: If we think about property prices as parents and you're a parent, as am I. I've got kids that within not too many more years are going to want somewhere of their own to live and you wonder, you know, how is that going to be afforded because these prices are getting quite high . . .

STEPHEN LONG: The rise means more pain for indebted households, but the Treasurer Wayne Swan today stressed that it's pain for the gain.

WAYNE SWAN: Today's decision is a painful reminder that as the economy recovers, the Reserve Bank will independently move rates from emergency levels through to more normal levels. Now I know that's cold comfort for a lot of families, and a lot of people in business. But that's the reality of a strengthening economy.

STEPHEN LONG: And barring a global economic shock, it's a reality that will keep causing pain in the lead up to the federal election.

BILL EVANS: They haven't finished raising rates. They made it clear that they're still on this journey to move interest rates back to normal levels.

STEPHEN LONG: A dangerous journey for those already deep in debt.

COMPERE: Stephen Long reporting.

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ABC 702 morning show interview script written by Executive Producer Melanie Withnall on the topic of brain cancer

BRAIN CANCER ACTION WEEK—MARCELLA ZEMANEK

Brain cancer isn't one of the most common forms of cancer, but 1400 people are newly diagnosed with the disease every year.

To try and raise awareness and funds for research, the Cancer Council has launched a brain cancer action week.

Yesterday it was launched by four high profile women who all lost their husbands to the disease, Dr Chris O'Brien, journalist Matt Price, 702's own Andrew Olle and broadcaster Stan Zemanek.

Marcella Zemanek is hosting some of the fundraising events and she joins me on the line . . .

- Why is it important to have a 'brain cancer action week'?
- What is your goal for the week?
- Survival rates for brain cancer are not the best, once diagnosed patients only have a 25 per cent chance of living past two years . . . but are there some hopeful stories?
- What about brain cancer in children?
- The cause of brain cancer is still unknown, but when you talk with Annette Olle or Gail O'Brien do you see similarities between the diagnosis or treatment of your husbands?
- One of the goals for this week is to increase the funding for brain cancer research. How hard is it to get people to dig deep for research into another type of cancer?

- According to the Cancer Council there have been no significant increases in survival rates in two decades . . . is enough research being done?
- What do people need to know about diagnosis . . . are there any signs that people should look out for?

For more info:
Braincanceraction.com.au

2GB editorial written by Alan Jones

PETROL PRICE GIMMICKS AND POLITICAL INACTION

There has been plenty of discussion in the last couple of days about these 40 cent shopper dockets.

Let's keep it simple.

They mean one thing.

Small business under attack like never before.

Our national anthem starts with the words, 'Australians, let us all rejoice, for we are young and free'.

Well, some basic freedoms are under attack and government stands by invertebrate, which I suppose is a fancy word for spineless.

Small business is the backbone of our economy.

Not Woolworths or Coles or Caltex or BP.

But an individual who wants to operate and run his own petrol station or grocery shop or newsagent or pharmacy or bakery or butchery are all under attack from the Woolworths/Coles duopoly.

And government stands by, both governments, Liberal and Labor, and do nothing.

How can you have a situation where two petrol tankers depart from the same depot, one headed for a Woolworths/Coles petrol station, the other headed for an independent petrol station.

But the independent is charged 5 to 7 cents a litre more.

In America, the home of the free market, that is a criminal offence.

It used to be unlawful in Australia until section 49 of the Trade Practices Act was repealed in 1994 and the Howard government failed to reintroduce it.

So Woolworths and Coles in petrol enjoy an unjustified special privilege.

Then there's geographic price discrimination, which I've been on about for years.

Woolworths and Coles grab profits from areas where they face no competition to finance a practice of undercutting small business competitors in areas where they do face competition.

Once the independent has been driven out, jack up the price.

How does this help small business or the consumer, but more importantly how is it legal?

Then there are the shopper dockets, which enable Woolworths and Coles to cross-subsidise their over-priced groceries with illusory fuel discounts in order to steal the market share of the independent petrol station and drive them from the market.

And this is allowed by the ACCC, seemingly infested with small business haters.

So Woolworths and Coles were given special exemption from the Trade Practices Act so they can use shopper dockets to destroy small business.

The fact that a few independent petrol stations survive is testament to the superior efficiencies of small independent businesses.

And it's that superior efficiency that terrifies Woolworths and Coles because they know on a level playing field without their special privileges and their legislated protection from competition, they would be slaughtered.

Scripts used with permission from ABC and Alan Jones.

USEFUL WEBSITES

<www.2gb.com>
<www.2ue.com.au>
<www.3aw.com.au>
<www.abc.net.au/am>
<www.abc.net.au/pm>
<www.thewire.org.au>

10. COPYWRITING

Kevin Best

Like most radio station copywriters I fell into my career, in this case via the production, promotions and getting-lunches-for-the-boss departments. That was in 1977.

As a recording engineer I was a total pain in the arse—I always thought I could do better than the copywriters. Of course I didn't have to write ten or 20 ads a day, every single day. I didn't have to cope with sales people, clients or program managers with eccentric ideas of what made an ad acceptable.

I saw robotic copywriters churning out formula ads loaded with clichés and puns, secure in the knowledge that they were there for eternity.

I saw brilliant original thinkers who would fluke the odd gem then live in constant fear that one day the ideas would simply dry up.

I saw 'bag-of-tricks' copywriters who would dazzle you with their brilliant ideas for six months and then move to the next station for another dazzling six-month performance.

Eventually I became one of them.

Nobody seemed to have any clue where ideas came from, and what made some ads work and some fail. We all seemed to fumble in the dark, grasping at straws, waiting for a light bulb to appear over our head. No wonder we wrote clichés.

Every one of us lived in fear of the blank page. We faced this white monster, like Ahab's whale, ten to 20 times a day—every blank sheet was an opportunity to create something brilliant, and just like Moby Dick it proved elusive and tormented us.

BEATING THE BLANK-PAGE BLUES

The problem is not the absence of ideas, but the infinite possibilities. It is like coming to a traffic intersection with a million streets leading off it and no road map. You just sit there staring, not knowing which road to take.

We need to reduce these possibilities in order to focus our efforts.

A novelist does not fire up the word processor and start tapping away 'It was a dark and stormy night . . .' not knowing where on earth it will lead, who it will involve or what they want the reader to feel. A novelist decides to write a thriller. It will be populated by a cast of characters, each with a motivation or reason for being there. There will be a setting, a plot and subplots worked out. And then, and only then, does the novelist put pen to paper.

Copywriters rarely do that. We either string a few well-worn clichés together, grab a few historical figures and bung a product in, steal chunks from a well-known TV show or film, or create a hammy 'slice of life' where the characters talk in brand names. We generally try far too hard to be clever and spend little or no time trying to understand the consumer or the advertiser.

We do not analyse what we are doing, we do not weigh up the pros and cons of using various styles, we do not think about what is going through the minds of the people we are trying to reach. We do not have a clue what works and what doesn't work, so we go forward blindly and hope like hell that some of what we write sticks to something.

Unbelievable as it may seem there are things you can do to make writing radio ads easier, and more importantly *more focused.* Here are eight of them.

1. Put yourself in the shoes of the consumer

A bloke who is about to shell out $40 000 on a new car is not the same as a kid who is going to buy a chocolate bar. The main element of difference is *risk.*

There is virtually no risk in buying a chocolate bar; it is cheap, and if it tastes awful you have only lost a dollar or two. You don't need copious facts, you don't need to be sold on every copy point. You don't go to a newsagent and buy a magazine called *Which Chocolate Bar?* and read reviews of the latest products.

By the same token, you don't buy a car on impulse at the supermarket checkout. You research it, buy magazines, talk to friends, read reviews, test-drive various models, compare long lists of features. It costs a lot of money—if you make the wrong decision it could cost you dearly. There is a great deal of risk in buying a car.

If you are dealing with a high-risk product, you must reassure people that they are making the right decision. In press advertising this is usually accomplished with long copy and copious facts.

A chocolate bar on the other hand is a low-risk purchase—consumers are not glued to the radio, hanging on every word you say. Reading out the ingredients on the side of the pack as you would read out the features of a new car would not convince anyone to buy a chocolate bar. The role of advertising here is to build the brand and give people a nice feeling about the product, so that when they are standing at the checkout they buy it because they have heard of it and you have titillated them enough to want to try it.

In general, high-risk products need more information, while low-risk products need more entertainment.

Suddenly we have cut the number of roads running off our intersection by half. Let's see if we can reduce them even further.

2. Is it a tool or a toy?

We turn into a petrol station because we need to buy petrol. It is a necessity, a tool; there is no risk involved in choosing a brand because they are all basically the same. There are no magazines called *Which Petrol?*

When we mosey on up to the counter, vaguely trying to remember which pump number we are parked at, we see an array of chocolate bars, magazines in plastic wrappers, soft drinks, chewing gum . . . these are not necessities—they are toys. Low-risk toys. So here we have examples of low-risk tools and low-risk toys.

Low-risk tools include petrol, most foods, medicines, hardware items, basic clothing, small appliances, and so on. These are regular everyday purchases to which consumers pay little or no attention.

The ads have to be interesting because the products themselves are not.

Low-risk toys like magazines, CDs, soft drinks and chocolates are usually bought on impulse, often as a reward. There is an emotional angle to these products. We buy them because they make us feel good; the ads need to reflect this. We should feel good after hearing the ad, just as we would after buying and using the product, so in this area humour and music should be heavily used.

While a car might be a high-risk tool, there are also high-risk toys. When you buy yourself some jewellery or a new party dress or get your hair coloured, you are not necessarily risking as much as the cost of a car but you are putting at risk your image and your acceptance among your peers. There is considerable emotional risk in buying a new dress or choosing a new hairstyle, hence the fashion magazine *Vogue* and others like it. Because of the risk consumers pay more attention to what you are saying, but you must reach them on an emotional level rather than on the logical, fact-driven level you would use for high-risk tools such as cars, insurance, business equipment and the like.

So we've now decided whether we are dealing with a high-risk tool, a high-risk toy, a low-risk tool or a low-risk toy. The next major question you need to ask is this:

3. Do I have something to say?

Let's assume you are writing campaigns for two different DVD stores. We are selling low-risk toys. Store A is having a sale where all DVDs are half price for this week only. Store B is merely advertising the fact that they exist—they are not having a sale or special promotion.

The offer that Store A is making has to be the star feature of the ad. Half-price DVDs is a great offer! You do not need to make jokes about it, or do a song and dance. If you do, you run the risk of turning the spotlight away from the offer and onto the ad. You will get no thanks from the client if the only response is calls from friends saying 'Heard your ad, loved it, very funny.' The client just wants the till to ring.

Store B effectively has nothing to say that cannot be said about any other DVD store, so you have to come up with a method of making the store seem special or likeable. If listeners drive past that store on their way home from work and hear an ad that takes their fancy, they may well drop in, sign up and take home a DVD.

If you have something to say, say it simply.

If you have nothing to say, razzle dazzle them.

Sing, tell jokes, shock—do anything you can to be noticed, be remembered and be liked.

There are still a great many roads we can travel down. Shall we write a 'slice-of-life' ad, a demonstration ad, an interview-style ad, a problem/solution ad, a testimonial or a straight announcer read? There are many options.

4. Try everything

It only takes a moment to sketch out in your mind a rough ad, using various techniques. One option will feel right for your client. Only experience will tell you which it is. The first idea you have is not necessarily the best idea; it is usually the commonest execution for this type of product or service. That is why you thought of it and that is why you feel safe with it. If you feel nervous and uncomfortable with your concept it means one of two things: it is either breaking new ground or it is wrong.

Remember, the best ads are not written, they are rewritten. Just as an author may make several drafts of a book, a copywriter should never be afraid to finesse a script.

I always try to have an element of surprise in what I write. It adds a little spice to well-proven techniques.

5. Don't overdo it

Just because you have a 64-track hard disk recorder doesn't mean you have to use every track for every ad and load it with sound effects. Just because you have hundreds of CDs of library music doesn't mean you have to put them all behind every ad. If it is not adding anything, leave it out.

Music is a highly emotive tool; it is particularly useful in advertising 'toys'.

Theatre of the mind is a wonderful thing—but remember, advertising is commerce, not art. If you are devoid of an idea, all the production values in the world cannot save the ad.

6. Write as you speak

We read with our eyes, we hear with our ears. Written language is very different to spoken language. I have never heard anyone say 'I'm going down to the local pub because they have all my drinking requirements'. Yet I hear this in ads—*why*?

7. Do not make it hard work

If your idea is very complicated and requires total concentration on the part of the listener in order to work, think of something else. Never assume a listener knows everything you know about the product or service you're advertising. Once you have written an ad, go back and imagine you are new to it all. Does it still make sense? Or have you assumed too much of the listener?

8. Be your own judge

Chances are you are not going to get a lot of feedback on what you are doing, unless you do something so outrageous that you get listener complaints. So it's very easy to get comfortable. Don't. Judge yourself against the best work. Listen to award tapes and strive for those standards. And don't assume that because you have limited resources you cannot create award-winning material. The best ads are usually the simplest.

CASE STUDY 1: FOUR-WHEEL DRIVE

The client came to see me with a scrap of paper and a colourful brochure featuring a new four-wheel drive. The main point he wanted to get across was that this vehicle was powered by a high-quality engine—let's call it 'supersonic'. It was distributed by Supersonic Ltd, felt more like a car inside than a four-wheel drive and was excellent value.

The brochure consisted of little more than some glossy pictures and the scrap of paper had only a few facts and figures on it. The first thing I wanted to know was who bought these vehicles. In fact, they were rarely bought for off-road use—most were sold to wealthy families as vehicles to take the children to school and as glorified shopping trollies. It was perceived as safe, spacious and a little more interesting than a station wagon.

Most of the ads for four-wheel drives at that time featured rugged outback shots of mud-covered vehicles doing gravity-defying manoeuvres. I decided I would take a different tack and feature a small child—this being, after all, the reason why most people buy these things. It being a high-risk purchase, I also wanted to cram in some facts and figures to make people feel comfortable.

The resulting ad was very different from existing four-wheel drive ads. Because we used a small child, it had some impact on air and stood out next to all the announcer-read ads. Yet we still got the relevant points of difference across in a simple, memorable way:

VO We're back with Tiffany Johnson to find out why she loves her Supersonic four-wheel drive. Is it because it won the Auto Design Award?
FV No.
VO Is it because it was the first four-wheel drive across the line in the gruelling Pharaoh Rally?
FV I don't think so.
VO Is it the Supersonic engine under the bonnet?
FV Don't be silly. It's because Daddy saved so much money.
VO From just $40 900 the new Supersonic four-wheel drive is sold, serviced, and powered by Supersonic. Test-drive one today at your nearest Supersonic dealer.

Note: VO means 'voice-over' and FV means 'female voice-over'. If a male actor was required in the script it would be indicated by MV.

CASE STUDY 2: 20 PER CENT OFF WINE SALE

This was the kind of brief you often see at a radio station.

The client came in with a copy of his press ad that had, in enormous type, '20% Off Wine' with a side offer of a free cellar pack, and the conditions were that you must buy six bottles, either mixed or the same.

This was an excellent offer so I didn't need to be wildly funny or fill it up with extraneous characters or situations.

Oh, and one other thing, the boss wanted a loud FX at the beginning of the ad to grab everyone's attention.

Now, as a writer in this situation you can either fight this sort of ridiculous demand or try and turn it around. I tend to attempt the latter, just to see where it takes me. In this case it worked okay. Instead of simply having the FX and getting into the hard sell I made a joke of the loud sound effect in an anti-ad style, very much in keeping with the style of ad I had already been writing for the client. (We had established a knock-about type of speaker who told it the way it was.)

The result was a simple offer ad with an attention-grabbing device and a clear uncluttered message. The result was a 36 per cent increase in sales.

VO	Announcing . . . stand by everyone, here's a loud noise to make sure you're listening.
SFX	TRUMPET.
VO	Thank you. Announcing, Better Cellars' 20 per cent off bottled wine offer. This week at Better Cellars you'll cop a whopping 20 per cent discount on any half-dozen bottles of wine. Red, white, port or sparkling, mixed or matched. And, as if 20 per cent wasn't enough, Better Cellars will shove them in a free cellar pack to make carrying and storing a breeze.' Twenty per cent off bottled wine and a free cellar pack—what a ripper. But you'd better move it, 'cause it ends Sunday . . . Cheers, Better Cellars.

11. AUDIO PRODUCTION

Phil McNab and
Kevin Best

To compile a good audio product you must select quality material that complements the message in the segment you are making. You must then mix the various elements of voice, music and sound effects (FX), and evaluate the mix to decide if it will work well on your station.

ELEMENTS OF THE MIX

The three major elements in any mix are:

1. voice;
2. music; and
3. FX.

In a mixdown, these should all work together to make the program material work.

Voice

Voice carries the message. Choosing the right voice for the copy is your first challenge. The timbre, frequency and natural tone of a voice is a creative choice, and may be the only creative element in your material.

Think about whether you should avoid stereotypes in the selection of voices and material. Your listeners are not stupid and you may lose them by neglecting to consider the ethnic and gender groups that make up this society.

Just as important as choosing the right voice is choosing the right mic to record that voice. Just as there are many different voices, there are many different mics. It certainly helps to know some of the major brands and their characteristics.

One of the best tests for a mic's suitability is your ears. Experiment when you can. In many cases you have little or no choice of mic. You may need to thicken the sound with a little equalisation. Equalisation, compression and limiting are useful tools when recording voice.

Before recording, check your levels and make sure you have a timer available. The timing of ads is crucial, and in other applications it is always helpful to know the timing of voice work.

Be intelligent in your approach to copy by seeking to understand the mood and intention of the writer, then translate that into your production. Humour does not always have to be derogatory or clichéd to be funny, so be careful how you instruct the voice talent.

Check the copy for readability. It should be set out so that it is easy to read with double-spaced typing, proper phrasing, and possible unfamiliar words phoneticised if necessary.

During the recording follow the copy and carefully mark different 'takes' if applicable—especially if there is a lot to read. This saves searching later when you know that the first half of the second take, the middle of the fourth take and the second half of the third take is what you need. Place bookmarks in your audio editor to help you locate the good takes. At the end of the recording, before the voice artist leaves, listen and make sure everything you need is there and that it fits properly into the timing you had worked out. Listen for intelligibility or any other problems in the recording. Most voice artists know their mistakes, and tell you if their pacing was off or if there was a word that did not come out right. As you become more experienced you can judge this as the material is recording.

With the ability of high quality audio files to be sent electronically has come the capacity to use voice talent from anywhere around the country or even the world. On the downside of this is the loss of control over the quality of the recording and the ability to direct the talent. If you are having a script recorded remotely, unless you totally trust the engineer/producer at the recording location make sure you can listen to the recording session and be able to direct the talent even if only over the telephone.

Music

If properly used, music should heighten the impact of the spoken word. If it is not clearly doing that job it is probably better to leave it out.

There are three main things to consider when choosing either a piece of music to punctuate the voice or a piece of bed music to accompany the voice. These are:

1. the material or copy;
2. the client—the client can be the station itself; and
3. the station format.

If the goal or message of the material is clear you can then go about finding the appropriate music to embellish it. If the meaning of the material is vague or unclear, music may even have a negative effect and is best left out or used elsewhere.

Read and absorb the spoken word and get a feel for it before deciding which music will work to extend its impact. Knowing your client will help you to choose background music for an ad. Find out what sort of business it is and what sort of clientele is the target. Find out if the station has done a spot for that client before and if there is a preference for a particular style of music. Usually you look for music that suits the station programming, but sometimes you want music that stands out from the rest of the station sound. For example, rap music would not go down very well with an easy-listening station format but, if used strategically, it will stand out and might create the right sort of impact.

When choosing music, consider timing. Does the music fit the timing of the program piece? Does it lend itself to be faded down at an appropriate place at the head and faded up at the end? Does it finish with aplomb, or does it fizzle just where you need a little sparkle?

Finally, think about the reason for music. Maybe the material or ad would work well without it. It could be that music might complicate a simple, direct message.

As a general rule of thumb, an anonymous, professional voice telling the listener about the product will be enhanced by a suitable music bed but a personalised message, such as the client or a testimonial, may be better left 'cold voice'.

Sound effects (FX)

FX have always been used in radio, particularly where they strengthen the visualisation and thus the impact of the program. With a good blend of FX and atmospheres, you can transport your listeners almost anywhere.

Sound effects are fun to experiment with and you certainly should consider them for whatever you do. You can select them from a library, or you can find or construct them and record them yourself. Use them with the same consideration as music, especially in the 'reason for existence' department. Never overcomplicate the sound—simplicity is often your best tool.

SIMPLE RULES FOR THE MIX

1. Keep the message clear. The simple thrust of whatever you do should not be overwhelmed with embellishment.
2. Enhance the message with effects and music, keeping Rule 1 in mind.
3. Please the client, whether it is your station or an advertiser. The client's money is paying for the product, whether in studio time or advertising dollars.
4. Please the listeners. If you are not in radio to entertain, enlighten or inform an audience, you should question your motives!
5. Reflect your station's format. Clashes with station format or programming do not make good mixes, or win you friends among management.

PRODUCING COMMERCIALS AND ANNOUNCEMENTS

An advertisement or sponsorship announcement is created at the word processing keyboard, not in the production studio. Before a script comes into the production department it is already a good or bad ad. Production cannot turn a badly written script into a good ad, but production can turn a well-written script into a bad ad.

Production can also make a good script into a brilliant ad. This is achieved through two steps:

1. directing the voice talent well; and
2. doing a good mixdown.

Directing voice talent

You will get the best from your talent if you:

- enjoy yourself;
- listen to everything;
- illustrate rather than demonstrate;
- give support rather than criticism;
- think fast, be decisive, maintain the momentum; and
- nag.

Enjoy yourself

Be pleasant. Recording ads should be fun for everyone involved. Enjoy the bloopers. Make a joke about the typos. Everyone is under pressure, so reduce that pressure by having fun. Tension can be heard, as can a smile, so be cheerful and keep the recording session happy. If the talent becomes upset or grumpy you will never get a good read. Even if it has taken 25 takes and they still cannot get it right, do not let your frustration show through. Keep making positive, encouraging remarks.

Listen to everything

How can you tell someone you did not like the read if you were on the telephone at the time?

Listen to the words, inflections, characterisation, pauses, details and the feel. Time it as it is read to avoid constant replays. Record every take, especially the first one—it is often the best.

Watch the script, not the talent. Often they look better than they sound and listeners cannot see the expression on the talent's face. Listen to other people's suggestions. Your engineer may have a brilliant idea or the talent may have a character voice tucked away. Listen to it. Do not let your ego spoil a good ad. You should have an idea in your mind of how the script will sound when it is finished, but be flexible.

Listen to *all* suggestions, accept *only* the good ones.

Illustrate, do not demonstrate

Let the voice talent read the script aloud before you indicate what you want. If you read the script you could lose some real magic as the voice talent may mimic your delivery.

Give emotional and physical clues to the character, for example, 'Be a nervous job applicant', or 'I want you to sound like you've just won Lotto', or 'This guy is a truckie with tattoos on his tattoos.' It is then up to the talent to interpret it.

Give support rather than criticism

Involve the talent in your discussions. If the talkback button is not on they cannot hear you. If you are talking to the engineer the talent may think that you are being critical. Paranoia kills great ads. Involving the talent can create one.

Always give reasons for a re-take. Do not ask a voice to re-read a script without giving a new direction to take. By the same token, if you are happy with a read, say so. To just say, 'That's fine' or 'That's better' is not enough.

If a voice does not like a read, have another take—it is the talent's reputation on the line.

Think fast, be decisive, do not lose the momentum

Do not listen after every take; this leaves long pauses between reads and no voice talent can keep a character while you 'um' and 'ah'. Find out where the intercom button is and use it to keep the voice talent in the loop. Do not rely on other people. Only one person can run the session. If a voice talent makes a mistake let them re-take it instantly and keep the recorder running.

Nag

While it is important to listen to other opinions, it is you who must take responsibility. Input from different sources can be helpful, but there should be one person to make the final decisions and say, 'We're doing it this way.' You get the flack from the client. You have given the voice talent support. You need to get the read you want. Do not accept second best. Nobody will be satisfied.

The final mixdown

In the final mixdown remember these points.

Music

Only include music if it will improve the ad. Music can increase drama. Music can make a funny ad funnier. Music can make a sad ad sadder. And music can make a bad ad worse. The best thing music can do to a bad ad is help you bury it.

How do you go about selecting the right music? Practise. Listen to your production library—all of it. Listen to TV programs. Listen to old radio dramas. Listen to cartoons. Listen to films. Listen to other ads.

Editing

Edit the announcer's voice for sense and for duration. The voice should flow smoothly and naturally, and fit into the desired time window for the ad or sponsorship.

Beware of creating the effect of a 'jump cut' where you artificially take out breaths without leaving a natural pause in the speech. Sometimes tight editing or de-breathing (cutting out breathing sounds) can be used to create a desired effect, but often it just disorientates the listener if done too tightly.

In the same way, listen for inflection points as you edit. A voice with a rising inflection leads listeners to expect the person will finish their sentence, but if they are cut off at that point the listeners will be left waiting to hear what comes next and may be distracted from the main message.

Sound effects

There are two types of FX—realistic and unrealistic. An example of an unrealistic FX would be a slide-whistle denoting a falling object. This sound was created for cartoons and would sound stupid in a realistic war drama. By the same token, you would not expect Noddy to drive a car that sounded like a current model Holden. Choose the FX most appropriate for the ad.

Wherever possible, make your own FX. Turned pages, coughing, telephone dialling, and many other effects can often be made easily and always sound better than prerecorded effects because of their authenticity.

Do not overdo the FX. Often one carefully chosen effect will sound better than several FX mixed to an inaudible pulp. Less is often more.

Electronic effects

Reverberation (reverb) is the effect most commonly added to advertisements and sponsorships. Some engineers seem to think an ad has greater impact with the addition of reverb. In a hyped ad with music this can sometimes work, however, on the whole it sounds false.

In a realistic spot, reverb is out of place unless you are in a cave or dungeon. Echo, phasing, doubling voices, reverse-echo buffering, and so on can either distract listeners from the message or enhance the effectiveness of the ad. Be sure you make a sound judgment whether effects will improve or undermine the ad.

Speeding up or slowing down voice can simulate a telephone conversation or a nagging person in the background. Speeding up a read with the appropriate pitch shifting to compensate for the change in voice pitch can sometimes shave off valuable seconds from an advertisement that is just a few seconds over time, but beware of making the voice sound too artificial.

Equalisation (EQ)

The two main uses of EQ are, first, to make a voice sound as natural as possible and, second, to make a voice sound like it is on the telephone.

If possible, leave EQ until the mixdown stage. This is so you do not take out a frequency that you may want to put back in later. Once something has gone you cannot boost or replace it.

When simulating a telephone conversation it is probably better to record the voice over a telephone rather than just EQ it, because the distortion and general sound of a telephone mic cannot be duplicated by simple EQ.

For cut-through you can emphasise the high frequencies a little. To bring authority or power to the voice enhance the bass frequencies.

Balance

The right balance of the various components that make up a spot is vital. If a character is opening a door in the bedroom while the action is taking place in the lounge room, the door effect should sound distant. The mic cannot be everywhere at once. You must decide where it is in relation to the voices and where the various FX are. This is not so vital when using unrealistic sounds. Practice makes perfect.

With panning, each effect should be panned as naturally as possible. Those old Beatles songs with music in one channel and voice in another sound very out of date today.

Be subtle.

Production values

The more you put into an ad, the longer its life span. No ad is good enough to last forever and eventually listeners will tire of it. If the ad has a punchline, its life will be very short.

You can lengthen an ad's life by adding 'production values'. Subtle jokes, witty phrases, FX and asides can all add to an ad's life. The more innovative the production values, the longer the life. Each time listeners hear an ad they hear something new, but be warned: too many and you lose the message. Listen to award tapes for production values instead of copy ideas. You will be amazed at the number and variety of new ideas and techniques you can pick up.

For a discussion of audio mixing equipment see Chapter 4.

PROMOS, SWEEPERS AND IDENTS

As well as producing advertisements, an audio engineer will probably also make station imaging. Imaging audio can take the form of promos, which are similar in structure to advertisements and promote programs or station events, or sweepers, which are usually inserted between music.

Sweepers are short messages of between about two and ten seconds which usually say the station name and slogan. When mixing sweepers ensure the voice has cut-through by using equalisation, and that the music under the voice will blend smoothly with songs played after it.

Idents (IDs) are usually 'cold-voice', meaning they do not have music under them. Reverb, pitch shifting and EQ may be used to enhance the voice and achieve cut-through when these are played over the beginning and/or end bars of songs.

With the advent of digital radio, audio engineers will increasingly have to think about cutting music to match pictures and animated GIF files because advertisements, sweepers and promos will also have pictures, logos and data associated with them. (See section on digital audio multitrack workstations in Chapter 4 for more on multimedia file standards)

12. NEWS

Russell Powell
and Glenn Daniel

IN THE BEGINNING

Broadcasting news on radio had its genesis in the 1920s. Announcers with the then Australian Broadcasting Commission (ABC) were given approval to randomly read 'selected items' from local newspapers.

As the ABC carried no ads it relied upon raising revenue from the sale of radio receivers and, later, government licences.

The newly established commercial stations—in some cases owned by, or affiliated with, newspaper companies—had agreements to take news from the daily publications and read them on air at semi-regular timeslots, providing the semblance of a news service. To maintain the news service the stations had to pay a weekly fee, providing there was acknowledgment for the source of the information.

As you can appreciate, this meant that radio news was forever behind its print counterpart and it had little or no editorial control. Needless to say, the print medium was more than happy with the arrangement. It offered no threat, generated useful revenue and meant, or so it was thought, that this new medium called radio would not interfere with the supremacy of newspapers as the major news source.

By 1934 the ABC had hired its first Sydney journalist, PC Murphy. In Melbourne the 'Watchman', EA Mann, was steadily gaining popularity as the first radio news 'commentator', albeit under complete anonymity.

Under government decree the ABC was limited to no more than 200 words via cable from Australian Associated Press (AAP), and the bulletin could not exceed five minutes and could not be read earlier than 7.30 pm, when people were deemed to have finished reading the newspapers.

By 1936 the ABC had formed the first news department, but it was to be another ten years before it was finally free to operate a full news service independent of the newspapers and AAP.

The future power of this radio news was demonstrated for the first time in 1932. To an enthralled national audience of several hundred thousand, Conrad Charlton described the outrageous actions of Captain Frank de Groot at the opening of the Sydney Harbour Bridge when de Groot rode his horse through the crowds and sliced the ribbon with his sword moments before the official cutting by Premier Jack Lang.

By the mid-1950s commercial stations had introduced hourly bulletins.

For Australia, radio news had more than shown its worth, bringing detailed information on the Second World War, the Korean War, stock market crashes, the Suez crisis, the Olympic Games, international cricket matches and a host of vital daily news.

In the late 1950s the transistor radio provided radio with the edge it still has today—portability. Presenters who were used to listeners sitting in their lounge rooms had to get used to them sitting in cars, on the beach, or wherever.

The new technology also provided portable tape recorders, voice links between towns, cities and nations, and an ever-increasing network of stations across the country.

Newly switched-on Australians of the 1960s were quickly becoming accustomed to hearing about events almost as they were happening; in some cases *as* they were happening. Through the 1970s and 1980s the 'live news event' became a regular feature on radio bulletins, for example, the coroner's verdict on the Azaria Chamberlain case, the Challenger disaster and then the first Gulf War, the first truly 'live media' war.

There were other technological advances that gave the medium a lift as well. Whereas once live reporting was at the mercy of scratchy two-way radios, the mobile telephone gave the reporter true versatility and allowed much more contact with newsmakers away from their desks.

AM stereo was a fizzer, but the arrival of FM broadcasting in Australia in the late 1970s changed news presentation dramatically. The concept of the shorter, more conversational news bulletin took off at the FM stations, which were mainly music based. It also changed the AM band that segmented and allowed the emergence of the first all-talk station, NEWSTALK 2GB.

2GB's news network, Macquarie News, had been established for many years and had earned a reputation through news presenters such as Brian White and Derryn Hinch. The station converted to all-talk just as news of the Falklands War broke, a good source of news events for the next six months.

The 1980s also saw an increasing sophistication of listeners in finance matters. Prime Minister Keating's repeated assertions about the J-curve and the balance of payments, as well as national recession, meant listeners learnt a lot more about finance and economics, and that was reflected in radio news coverage.

Community radio licences widened the choice for listeners even further and the establishment of radio news courses meant there was a ready pool of trained news professionals.

The mid-1990s saw the introduction of Australia's first all-news station, the ABC's NewsRadio, and by the end of the 20th century Pay TV news services were competing vigorously with radio to be first with live news coverage.

The internet has also expanded the range of news services available to consumers and a further segmentation of the market is taking place as technological advances dominate the first years of the 21st century. New competition and opportunities are coming from the internet and new digital radio channels present opportunities for news to be presented within new formats.

HISTORY AS IT HAPPENS

Listeners who lived through these events still vividly remember the radio reporter's description of the last helicopter taking off from the roof of the US Embassy as Saigon fell at the end of the Vietnam War; the phrase 'Stand up Australia' as *Australia II* crossed the finish line to win the America's Cup; the shock of the assassination of John Lennon as it came across the air in 1980; the reporter's shout of 'Incoming scud missiles!' as the Gulf War began; and the sadness of Princess Diana's death. These are all priceless moments in radio. What heightens the emotion is the immediacy of the reporting. We were hearing it as it happened. We heard the America's Cup win over our cornflakes and people driving home from work would have tuned in to John Lennon tributes as the news broke of his death. Even though TV has now bridged the technology gap and can transmit live from the scene, it is limited by the capacity of current video phone technology. If there is a telephone line there, or mobile telephone coverage, radio can have the news on the air in seconds. Immediacy and portability will be crucial for the future of radio news as it competes with other media such as TV and the internet.

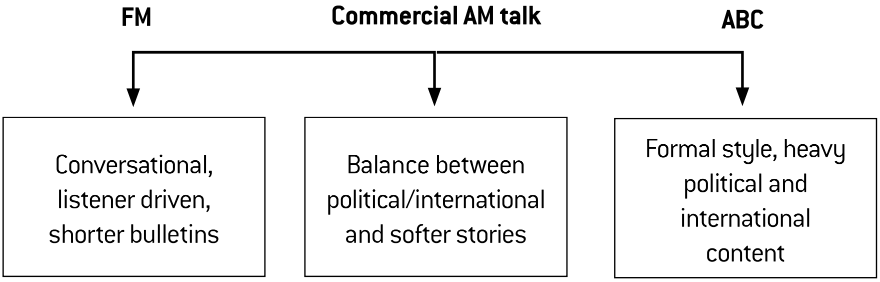
Radio news remains the most immediate, portable, one-to-one source of information despite competition from other media. Radio is the most intimate media we use and the relationship it creates with a listener is something other media can't provide.

STYLE AND SUBSTANCE

What is the purpose of radio news? Is it to inform? Is it to entertain? Both? Neither? Is it to keep the hours apart? In all its forms, the purpose of radio news should be to inform people of the significant events that affect their lives or society as a whole. This can be done in a variety of ways.

As radio formats have changed and are segmented, so too has the way we do news. Whereas once news readers wore bow ties and dinner jackets and spoke in precise English, they now use less formal language and have a more relaxed style.

If you think of radio news as a spectrum of style, it would look something like this:


FM
Commercial AM talk
ABC
Conversational, listener driven, shorter bulletins
Balance between political/international and softer stories
Formal style, heavy political and international content

You can see the wide variation in style—not just in the way stories are written, but also the types of stories that are chosen. Some stations lean more toward entertainment than information. Some lean toward more populist issues while others favour a world view, focusing on major political and international events.

An FM station would be more likely than an AM station to favour 'lifestyle' stories, involving health, environment or 'hip pocket' subjects. They would be written in a conversational style. For example:

Get ready to pay more for cigarettes, beer and petrol.

The Treasurer says they're all going up.

The Budget also puts a slug on the price of a new car—up 10 per cent because of a new tax on engine parts.

That will mean the average family car goes from 20 000 to 22 000 dollars. Canberra says all the price rises are effective immediately.

At the other end of the spectrum, the same story might read:

Treasurer John Jenkins has handed down the federal budget, allowing for increases in a range of domestic products and increasing transport costs substantially. Mr Jenkins told the House that there will be a new tax on engine parts, indexed to inflation, that will affect all vehicles made after August the first. There's certain to be controversy over an increase in petrol levies, and tobacco and liquor excise.

National News Editor for the Australian Radio Network Glenn Daniel says the principles of news on FM are the same but the packaging will vary. 'In the end, the listener can't see the copy. They only hear it. It must be clear, succinct, easy to understand.'

Regardless of the differences in style, radio news writing has one aim—clear communication of facts. It may be delivered in conversational or formal style, but the listener must grasp the meaning first time, every time.

In radio news, listeners do not have the luxury that the newspaper reader does—the option to read at their own pace, and go back and re-read difficult parts. They rely on you. In addition, they may be in the car, cooking dinner, or out jogging. The news they hear must be readily understandable and informative.

As news reporter and reader, the language you choose must be succinct and the stories concise. When you present, there must be no irritating vocal mannerisms. Your voice, pronunciation and diction must be clear. Finally, you must know what you are talking about—you must understand the story you have written, or that someone else has written for you. Listeners need to understand too.

THE RIGHT STUFF

Before we look at the mechanics of writing and presenting radio news, let's stop and consider whether you are suited for radio journalism. Do you have the 'right stuff'? There are some natural radio news people, but there are also some excellent journalists who have got there by one per cent inspiration and 99 per cent perspiration.

First, these are the disciplines needed:

- *Ability to summarise and prioritise.* Can you listen to a 20-minute news conference and sum up what was said in 30 seconds? Taking a large block of information, picking the most important parts and producing a summary is at the core of what radio news is all about.
- *Ability to think on your feet.* Radio news is a fast-paced life. Instead of newspaper deadlines once a day you have a deadline every hour, or every half-hour in some cases. As well as thinking on your feet, you have to be able to talk on your feet—the ability to ad lib is essential.
- *Ability to express yourself clearly.* You must be clear as well as concise. For that, you need a good knowledge of the English language and how it works—grammar, sentence construction, and so on.
- *A wide general knowledge.* Radio journalists need to know a little about everything. They rarely specialise—that is best left to newspaper reporters with specific 'rounds'. So you need to have a working knowledge of politics, the courts, legal matters, sport, finance and international affairs.
- *The right mental attitude.* 'Getting the story' often requires persistence and a 'nose for news'. The ability to sniff out a story and follow it through till you get it is vital. The media is not a place for shrinking violets.

THE BASICS: TYPES OF STORIES

There are many ways to cover a story and each story lends itself to a particular type of coverage. For example, a simple cricket score would need only two paragraphs of copy. A sensational day's play would warrant a colourful report from the ground. A wrap-up summary of the play could include actuality of the two captains. Later, there could be a copy and actuality story featuring the man of the match. There might then be a feature-length report for a current affairs or sports show, filed from the ground with actuality of the two captains, the man of the match, the commentator and perhaps some crowd noise. The length of the story depends on your editor's direction or your station's style, as well as the type of story and its relative importance in the bulletin. Obviously the breaking lead story would warrant longer coverage than a minor story further down the bulletin.

Remember this

Regardless of the style, there are basic rules about radio writing that should not be broken. An easy way to think of it is by the rule used by the CBS Network in the United States for many years. It went 'Tell 'em what you're going to tell 'em, tell 'em, and then tell 'em what you told 'em'.

Under that rule, you start your story with a brief summary, the lead. It should 'hook' the listeners—so it should contain the most important and most interesting facts without being overly wordy. The second and third sentences (sentences are known as 'pars') should expand on the lead and give additional facts, and if there is time for a fourth par it can act as a summary, reinforcing the previous information.

For example:

> The Prime Minister has announced big tax cuts for Australians over the age of 45.
>
> For the average taxpayer in that bracket, it means a saving of 50 dollars a week.
>
> However, the amount cannot be claimed week by week, but rather in a lump sum at the end of the year.
>
> The tax cuts are the result of savings in the public service, where 7000 jobs have been lost through voluntary retirement.
>
> The Prime Minister's over-45 tax break will be handed out from April the first.

You notice the lead is simple, containing the major facts, but not confusing the listeners. If the lead par reads:

> The Prime Minister, John Jones, has announced at Parliament House in Canberra that tax cuts are to be given from April the first to all taxpayers in the tax bracket above 45 years, at an average saving of 50 dollars a week.

there is too much information. First, the name and location are unnecessary—most people will know the Prime Minister's name and where he works by now. Second, all the details do not have to be spelt out, just the main information that the tax cuts are for over-45s and that they are big. Too much information or too many subordinate clauses mean people become confused and lose the sense of what you are saying. Remember, radio listeners can be anywhere: in the bath with the radio at a low level, in the car with traffic noise all around, or at work with their minds on other things. They do not, like newspaper readers, have the luxury of re-reading a sentence until they understand it. You must write clearly.

The middle two pars of the story fill in the details and the final paragraph sums it up, so listeners who have only just tuned in to what was being said when the word 'tax cut' was mentioned would get sufficient information from the final par to make sense of the story.

The story could have gone on to quote the Prime Minister or the opposition leader.

> Prime Minister Jones says the tax cuts are a victory for the government, because the minor parties in the Senate had tried to block them.

Note direct quotes such as ' "The tax cuts are a victory for the government," said the Prime Minister' are not used on radio. It is difficult for the newsreader to read, and confusing for listeners. Direct quotes may be used rarely when one word or a phrase needs to be directly attributed. For example:

> The Prime Minister responded angrily to the suggestions, saying, and I quote, 'The opposition leader is an idiot,' unquote.

That is the only way direct quotes can be successfully conveyed on radio. Besides, radio has audio clips as a means of direct quoting—something newspapers do not have!

Other writing tips

- Use different words in successive pars. For example, if you refer to 'the Prime Minister' in the first par, use 'Mr Jones' in the second par and 'the government' in the third par, since he is the leader. Using the same term repeatedly spoils the smooth flow of the story.
- Watch your language! Often the simpler word is the better. Most stations do not want you to use obscure words, just because you know their meanings. Why use the phrase 'The Prime Minister was in an ebullient mood' when you mean 'The Prime Minister was in a buoyant mood' or 'The Prime Minister was elated'?
- Avoid the trap of speaking like an official such as a police reporter, a trade union representative, a bureaucrat, or whatever. Police reporters are particularly prone to this. While an officer might tell you 'The offender decamped in a westerly direction', you would translate that for listeners into 'The man police were chasing

ran off toward the train station'. Likewise, where a trade union official may say 'The membership considered there was a lack of due process and workplace negotiation, and voted to begin industrial action forthwith', you would translate that for listeners as 'The workers say they haven't been consulted about the change in shift times and voted to walk off the job immediately'. Officials usually speak in code and we, in the media, understand what they say because we work with it all the time, but we must be sure it is clear for all our listeners.

- Avoid unnecessary facts. It means little to say that the remote Peruvian village of XYZ—usually hard to pronounce anyway—in the Andes has been devastated by floods, when the average listener will have a much greater understanding if you refer to a remote village in the Andes, 200 kilometres northeast of the Peruvian capital of Lima.

Glenn Daniel's top ten tips for good radio news writing, reading and editing are:

1. Write the way you speak.
2. Make the lead the lead.
3. Get the facts right.
4. Short simple paragraphs. Brevity = Impact.
5. Spelling is vital
6. Write in the present tense.
7. Tell the Who, What, Where, When, Why.
8. Style to suit the station format.
9. Check your copy.
10. Practise.

SUBEDITING

The process of subediting, or 'subbing', copy should pick up most of the writing problems listed above. On shifts where more than one person is on, one journalist is designated as the subeditor (sub) and scans all copy before it goes to air, but on solo shifts you are both the writer and subeditor. Even if you are not solo, you should always perform a subediting job on your own copy.

The copy should be read and checked for errors, including spelling —it can still be important on radio—as well as typos, words left out, and a variety of other problems. The sub should also work out whether the copy makes sense and can be easily understood at first listening, and whether it leaves any questions in the listeners' minds. There is nothing worse than leaving out something basic in a story—and frustrating listeners because they have not heard the information they want—such as announcing a recall of dangerous goods, but not giving exact details of how to tell whether they are dangerous!

The sub should also look for any potential pronunciation problems and spell the word phonetically at the top of the page. It helps to read the story aloud—that is the surest way to spot problems.

If the story has audio the sub should listen carefully to the audio, checking it for mistakes or technical problems. Also check that the audio is identified correctly in the script.

Finally, the sub should check the script for legal problems: defamation, contempt of court, copyright, and so on (see Chapter 5, Broadcast Laws and Regulations for guidelines).

GET THE RIGHT ANGLE

The 'angle' of the story is very important in radio news. In newspapers, published once a day, there is only one angle. The morning broadsheet may headline its main story as 'Bus Crash Kills 30 People'.

The angle for breakfast radio may be the same. But the mid-morning radio angle may be 'Bus crash survivor tells'. It may be 'Bus crash survivors in critical condition'. Later in the day, 'Police warn about dangerous crossing after bus crash', and still later for afternoon drive 'Politicians visit the scene of bus crash'. You see the progression throughout the day. Radio is adding new information and 'freshening' our stories every hour. Listeners who tuned in on the way to work would expect to hear an update, with a different angle, when driving home.

Sometimes the new angle provides new information, or a reaction to the original story—sometimes it is simply an aspect of the story that has been there all along, but you highlight it to make the story sound 'fresh'.

ACTUALITY

Why use actuality? Why does a newspaper use photographs? It is a way of using the medium to convey information that could not be conveyed by words alone. The newsmaker's voice, manner of speaking, mood, background noise and colour all add information and dramatic effect to radio news. Consider the famous pieces of actuality that you have heard. The 1937 Hindenburg disaster with the announcer screaming

'Oh, the humanity'. The Kennedy assassination in 1963 with the breathless description of the moments after the shooting. Gough Whitlam in 1975 shouting 'Nothing will save the Governor-General!' The sombre description of Princess Diana's funeral. Those recordings all added an extra dimension to the already dramatic events.

Actuality tips

- Do not rehearse what you will say with the interviewee. The best audio is spontaneous. Try to keep it fresh.
- Include background noise where possible, as long as the interviewee can still be heard. An interview with a firefighter with the sound of commotion behind them conveys the full colour of the fire scene.
- Avoid adding the echo effect to scripts introducing audio. How often have you heard lines like 'Joe Phantom says the fire was very intense', followed by a grab of Joe Phantom saying, 'Well, the fire was very intense . . .'.
- Ask general questions for news actuality. Instead of 'Did you feel frightened when the man held a gun to your head?', to which the person will reply 'Yes', ask 'How did you feel when the man held a gun to your head?' That will often yield a better answer.

PUTTING IT ALL TOGETHER

Compiling a bulletin is a skill all radio journalists need to acquire. The bulletin should contain an adequate spread of stories so listeners perceive that they are hearing the 'whole' news. It should be balanced, with international, local, sport, finance, and whatever other areas the station might specialise in. It will usually be in accordance with the station's philosophy about news.

The order of the stories is decided based on their newsworthiness, how they affect listeners, their perceived level of interest and how recently they occurred. The lead story would rate the highest according to the criteria, and while it may not necessarily be the most important story of the day it may lead the bulletin because it has just happened.

Stories may also be grouped together according to topic, for example, all the finance stories might be reported together rather than the presenter jumping from finance to politics and back to finance again. It is easier for listeners to take in this way.

The age of stories is important. The breakfast news might contain many international stories that happened overnight, whereas afternoon drive news is often full of local stories that happened through the day. Stories are usually pushed down the bulletin as they age, until they quietly disappear if there are no new developments.

The sub is often the chief of staff, and the bulletin compiler. That person has to allocate stories to be chased, or send reporters on assignment, as well as be aware of what other stations are running. Monitoring competitors is important, but all stories should be checked before being put to air.

Here is an example of a commercial FM style news bulletin edited by Glenn Daniel. Note the capitalisation of names and short paragraphs, which would be supplemented by audio grabs at various points.

There was a rush on cigarettes at major retailers overnight as smokers bought up stocks ahead of the midnight price rise.

A packet of 30 has jumped two-dollars-16 under the Rudd Government's tax changes.

One woman was refused service at Woolworths in Canberra after trying to buy five thousand dollars worth of cigarettes.

Nurses have raised concerns about wearing I-D tags following the murder of MICHELLE BEETS at Chatswood this week.

The 57 year old—who worked at Royal North Shore Hospital—was killed as she arrived home on Tuesday night.

Nurses say forcing them to wear name tags could put them in danger from some patients.

The body of a man has been recovered from a lake in the Blue Mountains overnight.

The 68 year old from Hazelbrook had been kayaking at Wentworth Falls when he overturned and failed to re-surface.

Police divers searched the lake and found the man's body . . . a post mortem will be held today.

The Department of Climate Change won't be cutting staff despite KEVIN RUDD shelving plans for an Emissions Trading Scheme.

400 public servants are employed at the building in Canberra . . . 60 of them are senior executives on salaries up to 298-thousand dollars.

The bill for keeping the department going is 90 million dollars a year.

The Defence Department is investigating new allegations of misbehaviour involving the crew of HMAS Success.

The inquiry follows a visit to Singapore last week.

Some crew members are already the subject of an inquiry into claims of sexual misconduct.

BELINDA NEAL could stand as an Independent in the Federal election after being dumped by the ALP.

The controversial Labor MP lost pre-selection for the Central Coast seat of Robertson last month.

MS NEAL says she's considering her options and will make a decision soon.

Casual and retired teachers have been warned not to help the Rudd Government's literacy and Numeracy testing.

The NSW Teachers Federation has issued the warning . . . claiming staff will be entering a 'hostile environment' if they break the union boycott and agree to supervise the exams.

The Federation says their involvement isn't welcome and they should stay out of the dispute.

RUSSELL CROWE has caught up with soccer superstar CRISTIANO RONALDO during a visit to Spain.

CROWE is in Madrid to promote his new movie 'Robin Hood'.

He was presented with a Real Madrid jersey with his name on the back . . . in return he gave each of the players a South Sydney cap.

Broncos captain DARREN LOCKYER is a father for the first time.

His wife LOREN has given birth to a baby boy at the Mater Hospital.

THE BUCK STOPS HERE

Words of warning for the subeditor—the buck stops with you! Journalists and/or their stations have found themselves liable for heavy payouts because of failure to check facts. *Be aware of the broadcasting laws and regulations.*

There are several ways in which you, as a radio news reporter, can get into trouble with the law. These are briefly outlined below. For more detail refer to Chapter 5, Broadcasting Laws and Regulations.

Defamation

A defamatory statement is one that holds a person up to hatred, ridicule or contempt, or tends to lower the person in the estimation of a right thinking, ordinary, decent Australian. Depending on the state or territory in which you make the broadcast, truth may not be a defence. Familiarise yourself with local laws.

Contempt of court

A judge may hold you in contempt of court and fine or jail you if:

- you disobey the instructions in court; or
- you broadcast something in a trial that was not heard in court by the jury.

Personal opinion has no place in court reporting. Neither does investigative reporting! You must report only what happens in the court in the presence of the jury.

Allegations

Remember that people are innocent until proven guilty in a court of law. So in your reporting of crime events, do not say 'The gunman shot five people and was then arrested by police. He is 55-year-old Fred Furphy from Blandville, and police are about to charge him with murder.'

For a start you cannot use his name, even if you know it, until he has appeared in court, and until he is convicted the offences are only *alleged* to have been committed by him. So the story would read: 'A gunman has shot five people. Police have been questioning a 55-year-old man and are expected to charge him with murder.'

Be careful not to say that the gunman and the man police arrested are the same person. That is the same as saying the man is guilty when he has not been proved to be.

On the topic of naming, please be careful not to name victims of crime or road accidents until the names are released by police and relatives have been notified. There is nothing worse than people finding out via the radio that their loved ones are injured or dead.

ETHICAL ISSUES

Racial vilification and sexual discrimination laws are now in place in Australia. They vary from state to state and territory to territory, so be aware of the local legislation. A general rule, though, is to only mention things that are pertinent to the story and avoid unnecessary stereotyping. Be careful, also, with using race as a descriptor. Saying 'A man of Mediterranean appearance was seen running from the building just after the shooting' provides little in the way of detail. There are several countries bordering the Mediterranean. Or similarly, 'Police are hunting for an Aboriginal man wanted over the murder of . . .'. Use this only if the fact that he is Aboriginal is vital to the story. After all, we do not say 'Police are looking for a white man wanted over the murder of . . .'.

Beware also of stereotyping people on the basis of religion. Portraying Christians as hypocritical fools is as bad as portraying Muslims as bomb-throwing fundamentalists. Be aware of the differences in religious belief and practice and do not ridicule those with world views that differ from your own.

HONESTY AND INTEGRITY

Personal opinion has no place in your on-air news work, unless you are a news commentator and you are called upon to give your opinion. Use facts. Familiarise yourself with the Journalist's Code of Ethics (see below). Some other ethical issues are:

- Do not secretly record people on the telephone or in person. Always tell them their remarks may go to air.
- Do not intrude into people's grief. Some people may be willing to talk to the media, particularly in the case of missing persons, but please be sensitive to the feelings of victims and the families of victims.
- Do not be influenced by bribes or gifts.

FACTS—JUST THE FACTS

Moment by moment, a radio newsroom can be one of the most exciting places to work. Despite the old saying 'Never let the facts get in the way of a good story', I would warn you, 'Never let the adrenaline rush get in the way of the facts'. Keep your head in high-pressure situations and aim to get maximum information to the audience with maximum accuracy. Giving listeners the information they expect, and need, keeps them coming back to your station and, ultimately, to radio for their news—that ensures a future for us all.

JOURNALISTS' CODE OF ETHICS

Respect for truth and the public's right to information are fundamental principles of journalism. Journalists describe society to itself. They convey information, ideas and opinions—a privileged role. They search, disclose, record, question, entertain, suggest and remember. They inform citizens and animate democracy. They give a practical form to freedom of expression. Many journalists work in private enterprise, but all have these public responsibilities. They scrutinise power, but also exercise it and should be accountable. Accountability engenders trust. Without trust, journalists do not fulfil their public responsibilities.

Media, Entertainment and Arts Alliance (MEAA) members engaged in journalism commit themselves to: honesty, fairness, independence and respect for the rights of others. The Journalists' Code of Ethics advises:

1. Report and interpret honestly, striving for accuracy, fairness and disclosure of all essential facts. Do not suppress relevant available facts or give distorting emphasis. Do your utmost to give a fair opportunity for reply.
2. Do not place unnecessary emphasis on personal characteristics, including race, ethnicity, nationality, gender, age, sexual orientation, family relationships, religious belief, or physical or intellectual disability.
3. Aim to attribute information to its source. Where a source seeks anonymity, do not agree without first considering the source's motives and any alternative attributable source. Where confidences are accepted, respect them in all circumstances.
4. Do not allow personal interest, or any belief, commitment, payment, gift or benefit, to undermine your accuracy, fairness or independence.
5. Disclose conflicts of interest that affect, or could be seen to affect, the accuracy, fairness or independence of your journalism. Do not improperly use a journalistic position for personal gain.
6. Do not allow advertising or other commercial considerations to undermine accuracy, fairness or independence.
7. Do your utmost to ensure disclosure of any direct or indirect payment made for interviews, pictures, information or stories.
8. Use fair, responsible and honest means to obtain material. Identify yourself and your employer before obtaining any interview for publication or broadcast. Never exploit a person's vulnerability or ignorance of media practice.
9. Present pictures and sound which are true and accurate. Any manipulation likely to mislead should be disclosed.

10. Do not plagiarise.
11. Respect private grief and personal privacy. Journalists have the right to resist compulsion to intrude.
12. Do your utmost to achieve fair correction of errors.

THE FUTURE OF JOURNALISM

The following article, written by Steve Ahern about the London suicide bombers and first published on radioinfo, explores the phenomenon of citizen reporting which has become more and more prevalent. How radio reporters and editors use the material submitted through mobile media devices will be crucial to cementing the role of radio newsrooms and will keep radio news competitive in the face of competition from the internet.

15 minutes' journalistic fame . . . from your mobile phone

> In 1968, Andy Warhol said: 'In the future, everyone will be world-famous for 15 minutes.' In 2005, mobile media technology has come far enough to predict: 'In the future, everyone will be a worldwide journalist for 15 minutes.'
>
> The ubiquitousness of audiovisual communications devices and the proliferation of media outlets is putting the means of reporting news in the hands of anyone. The internet has already seen this trend happening online, and last week the London bombing showed us that it is now beginning to happen on TV.
>
> Where does this leave radio?
>
> The new trend of citizen-filed journalism will continue to change the way radio broadcasters look at their newsrooms.
>
> Radio was the first interactive broadcast medium. Telephone interviews and talkback programs have long provided a way for reporters and listeners to report into programs about everything from traffic accidents to disasters. The latest technological developments are now allowing other media to catch up.
>
> The addition of audio recorders and cameras into mobile phones, combined with the ability to email audio or vision data files direct from the phone memory to any media outlet that wants them, means that anyone on the scene at a newsworthy event can now become a reporter. For some time phone users have been 'reporting' one to one to their friends using this new technology, but the London bombing has become the historical point where this trend will have been deemed to have moved from

point-to-point telephone-like communication, to the point-to-multipoint broadcasting paradigm.

Media education in schools has also played a big part in the birth of this trend. Every primary school child has learnt how to make news stories. Every child knows how to operate a mobile phone. And every child has grown up with a vast experience of media formats and media outlets.

A drawback of this new trend will be the difficulty of verifying sources. An advantage will be the reduction of costs as more unpaid stringers file to media outlets for the reward of becoming famous. Some outlets may choose to pay them for their contributions and some may not.

When a confluence of historical circumstances meant that cassette recorders and community radio both developed in parallel in the 1970s, the means of producing and transmitting radio programs was put in the hands of everyone—allowing them to make programs cheaply and to get them to air with minimum control from the gatekeepers in professional radio organisations.

This trend is happening again at the digital level.

As well as mobile phone reporting, anyone can now produce a complex radio program on their home PC, and then send it to a website or radio station via email or FTP. With the greater sophistication of automation systems, it is possible for stations to process and play out these programs filed from elsewhere without anyone being present at the station.

Foreign correspondents have been using this technology for some time, but now anyone has access to it. The incorporation of camera lenses into phones and the continuing compression of video file sizes now sees the same trend happening for television, blogs, podcasts, wikis and websites.

The trend for citizen contributions has been evident in TV for years through funniest home video programs, but it is now spreading into a new program genre—news and current affairs.

Now that the genie is out of the bottle I confidently predict we will see much more of this type of reporting emerging as a new program form, that once again takes its inspiration from something radio has been pioneering for years.

To keep ahead, radio broadcasters will have to incorporate these new technological trends into their broadcasting, as they have done many times in the history of the radio industry.

Digital radio presents new ways for radio to package listener contributed digital content in its picture and text screens, as do websites, blogs and podcasts. Radio broadcasters must respond quickly enough to continue beating other media, as radio's competitors once again challenge one of the strengths of the good old wireless.

USEFUL WEBSITES

<www.abc.net.au/rn/learning/lifelong/features/journalism>
<www.alliance.org.au>
<www.bbc.co.uk>
<www.radioinfo.com.au>
<www.thefutureofjournalism.org.au>

13. TALKBACK

Steve Ahern with Kevin Brumpton and Alan Jones

Talkback cuts both ways. It is not necessarily a medium where listeners just talk back. It is a forum where a listener can express an opinion, but the announcer is also there to talk back.

- Talkback can be the dominant element of a program. An announcer may begin with an editorial and seek listener reaction to that view.
- Talkback may be mixed with other program elements. It may follow an interview to canvass the views of the audience on the topic they have just heard discussed.
- Talkback can be a forum where an exchange of views takes place.

Listeners may drive the content completely where the lines are opened and 'free-for-all' callers are encouraged to set their own agenda.

Expert help talkback is another way of using talkback. Gardening, fishing or home hints are part of this style.

Sometimes talkback can be advertisements like 'buy, swap and sell' or a discussion with the local car dealer about the latest specials. The style in which that advertising spot is presented may be as a talkback call, but it is still advertising and should be acknowledged as such and personal interests should be declared.

All these styles are legitimate uses of talkback.

TALKBACK DIFFERENTIATES RADIO

Since it was introduced in the 1960s, talkback has given radio one of its most important points of difference from TV and has opened up a new way of involving listeners in the sound of the radio station. When used well talkback can enhance the station and help the ratings; when used badly it can leave listeners feeling that they are hearing uncontrolled mindless chatter.

With the development of internet file transfer and mobile camera phones, talkback TV, blogs and 'talkback internet' are increasing as rivals to talkback radio, but digital radio's ability to utilise pictures and text will enable radio to keep up with these rival media as they challenge one of radio's strengths: its interactivity.

Talkback is about belonging

A warm welcoming talkback announcer can provide company and community to listeners. Talkback is about identity and interactivity. It confirms the identity of the station in listeners' minds. The callers they hear on talkback are probably like themselves, so they feel comfortable, almost part of a family. If they move to another station and hear talkback callers who are younger or older than them, or more or less articulate than they are, they probably feel out of place on that station. Once you have found a place where you are comfortable the next thing you like to do is have a chat with other people there, so talkback brings the kind of interactivity that is necessary when listeners want to join in and discuss a topic in a forum where they feel comfortable. According to 2GB's Brian Wilshire, a 30-year practitioner of talkback radio: 'The interactive nature of the medium permits the operation of a kind of information exchange where the combined intellect of the participants can be used.'

Geraldine Doogue describes the role of talkback in her Radio National program as 'challenging'. She believes that you need to 'stretch the listeners past their comfort zone, past their own prejudices'. She has high expectations of her listeners and says she has found that if they have first had the chance to listen to a specialist speaker on some specific topic, their talkback reactions are much better thought out. She acknowledges that talkback provides a great 'window on the community'.

Talkback is entertainment

An important element of talkback is entertainment, and not necessarily only smiles, joy and happiness. Bad news can also be engaging and entertaining if treated correctly and talkback radio uses this kind of entertainment often. A chat with someone who has just survived a landslide can be a riveting subject. While it might sound crass calling it 'entertainment', that is a large part of what it is. As a listener you tune in because you are grabbed by this and you are being engaged and entertained. There is an element of theatre and performance in all radio programs, including talkback. Hanging up on people, abusing them, sending them flowers, are all part of the entertaining theatrical nature of the performance and, when used properly, can drive your audience figures higher.

Talkback must be tight. If you talk about the weather with caller after caller, or say the same greetings and pleasantries each time, listeners quickly tire of your interaction with callers. Listeners also become impatient if one caller monopolises the airwaves without anything of substance to say. Get to the point early with your callers and wind them up when they have made their points. A good producer should check what callers want to say and, if there is time, rehearse them through their first few lines so that they know they are expected to come to the point. The talkback producer should also encourage callers and keep them informed of when their turn is and to whom they are to speak. In a breakfast program talkback segments are short, usually responses to competitions or humorous segments. Late at night, because listeners are willing to give more time to listen and to engage with what each caller has to say, the call length may be much longer.

Announcers handle talkback differently, depending on the time of broadcast and the aim of the program. A comedy program has a very different talkback agenda from a current affairs program.

If you are an announcer doing editorially based talkback you must have an opinion. You must engage with listeners if you invite them to call you. The way you do that depends on the station and on your personal on-air style, but you must engage otherwise talkback will not work for you.

According to 6PR's Howard Sattler you must 'balance responsible broadcasting with entertainment' to be a success. The now retired talkback legend John Laws believes that 'pure entertainment is everything, so if it's pure and good there need be nothing more to it'.

Talkback is powerful

Talkback is powerful because it can capture the voice of the people, the voters, and so influence politicians. Talkback is a great leveller. It does not matter if you are the prime minister or an unemployed teenager, you can have the same amount of airtime if you have something interesting to say. Before talkback radio, access to the airwaves was limited to a few select announcers and influential educated people who were personally invited to be interviewed. In the age of talkback, democracy rules. This can sometimes be exploited by people wishing to stir popular opinion into a frenzy but, used properly, talkback can be an incredible aid to democracy in our society.

Talkback also gives ordinary voters the chance to reach newsmakers and politicians through the telephone, helping to put power back into their hands, where it should be in a democracy.

Talkback radio has many heads. As a talkback announcer you must choose a style or a number of styles, depending on the program and what you want to achieve. For instance, the:

- knight in shining armour;
- friend and confidant;
- mediator;
- battler;
- lonesome cowboy/cowgirl;
- opinionated redneck;
- expert;
- powerbroker;
- friend of the stars;
- person next door;
- saviour;
- mother/father confessor;
- whistleblower; and
- folk hero.

A talkback announcer, like any media personality, usually tries to make a specific style their own. At times, some manage to assume all of these roles, changing and adapting personalities to suit the caller.

DELAY BUTTONS AND TELEPHONES

To be good at talkback you must know your equipment. Every radio panel is different, each delay system has its quirks, so become familiar with your delay system and how to get in and out of delay smoothly.

Delay holds the program back from the transmitter for about seven seconds before releasing it to your listeners; this is your safeguard against putting something to air that should not be heard (see Chapter 5 for more on broadcast laws and regulations). The key buttons for getting in and out of talkback are 'delay on' and 'delay off'. These switch the system on and off and allow you to get in and out of delay at chosen entry and exit points. There is another button relating to talkback delay: the 'dump' button. This button drops off the telephone line and deletes the previous seven seconds of program, stored in the delay system, so that the listeners never hear it. It is your saviour when someone says something defamatory or offensive and you want to prevent it from going to air. But be warned, the dump button usually throws you back to real time and can put a hole of silence in your program unless you resume talking or playing something immediately after pushing it.

There are other buttons for talkback hosts on the panel. The 'mute-to-call' button allows you to talk over a caller without them hearing what you are saying. The 'ducker' setting lets you decrease the caller's volume under your voice when you speak, by a little or a lot depending on the setting.

You must be aware of the telephone line quality, checking whether it is thin, dropping out and difficult to hear. If so consider asking the caller to ring back. And there are always some callers who do not turn off their radios and are hearing themselves back seven seconds later, causing them to pause and stumble. Ask them to turn off the radio and chat on for a few seconds while they are doing it.

CONTENT

In your program preparation you should seek to break issues down to their core elements because those stark statements polarise callers and inspire them to call you. Eventually the subtleties of an issue emerge, as long as you allow enough time to hear a good range of callers.

As a talkback announcer you are confronted with a great many issues. One moment you are asked to give advice on religious matters, the next moment you are asked your opinion about abortion. The next day it could be foreign trade, immigration, gun laws, AIDS, war, the environment. Listeners want the talkback announcer to go into battle on their behalf. A talkback announcer who succeeds in slaying the dragon can score many points, especially ratings points.

The impact of the talkback host on people's lives can be significant. The break-up of the extended family and close-knit communities has forced many people to resort to talkback to answer some of the important questions in their lives. Quite often the opinions of these listeners are formulated by the talkback announcer so, given your influence, you need to have a good understanding of the issues that you are commenting on and you need to have a sense of moral obligation to inform your listeners as well as you can. You should be well read on issues of public interest.

Only if you have a wide general knowledge would you open the lines to all comers. Otherwise choose one topic, study it before the program and stick to it. Another option is to play the role of mediator, interpreter or devil's advocate if you feel out of your depth arguing a contrary opinion with your listeners.

2GB's Alan Jones is Australia's most successful talkback personality. He attributes some of his success to his ability, as a former school teacher, to simplify and interpret issues and teach his listeners about them. He also says hard work is essential:

> It's said that I can express complicated issues in a way which is understandable. This comes of course from a lot of reading and a lot of homework, but I guess it also derives from my background as a teacher.
>
> I think good radio people are teachers as well. There's no point talking if there is nothing for someone to listen to, or if what you say they don't understand. Too often people in radio make that mistake. They're virtually talking to themselves . . . the aim of the job, in my opinion, is to inform and entertain. You can't explain things simply if you're not on top of your material. That requires a lot of homework and I think I do a lot of homework.

Another element of great talkback, says Alan Jones, is the ability to listen:

> The first element is being able to listen, given that in talk radio you're inviting people to ring . . . I don't think anyone could say that people who ring my program are talking about trivia. They're people who are informed and they seem intelligent, they've got a view about things and it's important to hear that view. Much of my program material, I might add, comes from my listeners.

What do listeners most want to hear?

There are some common themes of interest to almost everybody:

- Hip pocket—anything that affects the amount of money a person can earn or has to pay.
- Personal safety—anything that makes people feel unsafe in their home or in public.

- Personal health—issues surrounding wellness and sickness with real examples.

If packaged well these issues will always attract listener attention on any station. Sport, hobbies, transport, weather and nature also have broad appeal to many listener segments. Some listeners just want their prejudices reinforced, while others want to engage their minds.

Alan Jones says you must balance the interest of the caller with the interest of the listeners. He describes his approach this way:

> You have to remember that the bulk of the people just want to listen. They don't want to ring in and talk, so you've got to balance all of this up. You can't let a person at the other end of the phone completely indulge themselves because it's a switch-off to people who are listening. But there is no royal road in all of this. There might be a given day when I raise an issue about a pie shop at Hornsby and suddenly the whole world will ring about where they buy their best pies. It's not earth-shattering stuff but it's interesting, it's amusing and it's part of people's everyday life.
>
> So listeners ring and talk about those things that they feel most preoccupied with. Those who are listening but never ring want to be informed and entertained.

ABC Radio National presenter Sandy McCutcheon says:

> Radio National talkback programming covers such a huge range of topics that it is hard to pin down particular issues that listeners most want to hear. However, major national debates such as tax, workplace relations, constitutional issues, are always popular. The Radio National audience is also very adroit at tuning in to more philosophical and spiritual issues than most commercial talkback shows. Issues of national importance and environmental issues are also big drawcards.

What do listeners least want to hear?

Whenever listeners are surveyed about talkback radio 'politics' inevitably comes up as the number one topic they dislike. But, without more interpretation, this can be too simplistic and deceptive to be helpful.

Usually what people mean when they say they dislike hearing about politics is that they find the tired old political sparring matches between politicians boring and unproductive. It is a good thing to avoid this type of politics on your program.

But big-picture politics underlies most things we talk about. The politics of getting better hospital services, or decreasing taxes or improving schools are legitimate and appealing topics for talkback if packaged in the right way, with real examples and personal stories, so do not ignore everything in the news just because you want to avoid politics.

Alan Jones explains his approach this way:

> I think there is a very low tolerance for bad news and politics comes into that category all the time. They know the government's crook, they just don't want to hear everyone talking about it.
>
> However, sometimes you do have to do that because in the educative role, you've got to try and engage your audience and help them to understand. The classic case of this is the emissions trading scheme. It was a very lonely time talking about all of this. I was completely opposed to it. I don't believe the science is confirmed, nor do I believe that the alarmist language had any justification. Therefore it was necessary to keep on raising this issue and interviewing people who would be able to provide some illumination on the subject. Now at the end of the day we've seen what a fiasco the whole thing's been. Without this comprehensive advocacy on radio we could have been trapped in the most appalling legislative mess this country had ever seen.
>
> So you don't always fashion your program according to what listeners want to hear. You've got to make judgments about what you think would be a good program for today and go to it.

ABC talkback listeners are often considered different from commercial talkback listeners. Sandy McCutcheon gives his opinion about the difference between Radio National talk programming and commercial talkback:

> *Australia Talks* and *Late Night Live* are some of the few programs that allow an in-depth discussion on a single topic for an extended period. Because the tone of the discussion is set by the guests, the conversation level is usually quite high without being exclusive. Good focused talkback can actually contribute to a national discourse. The same is rarely true of commercial radio.

WRITING EDITORIALS

What is an editorial? Kevin Brumpton has written straight editorials for radio talkback programs on 2UE and humorous editorials for personality programs on 2SM and 2WSFM. He says:

> In my view, an editorial is just simply an opinion. It's an opinion that sets out an issue and it takes a stand on it. Does it have to be balanced? Maybe.

> It doesn't always. A one-eyed editorial can be just as effective, as long as it's informed and not based in ignorance or a shallow understanding of the issue. Of course you can be completely one eyed about it—that's part of having an opinion and taking a stand. But there's no point in saying things like 'all unemployed people are dole bludgers'. That will certainly elicit a response amongst a certain audience and it's used as a tool. But it's hardly a basis for a constructive talkback program or a sustainable talkback show—there must be substance as well.
>
> The editorial should certainly be evocative. You have to be evocative in what you say. I don't believe a talkback host should really need to solicit calls—simply saying things that evoke a response, that make people want to pick up the telephone, should be enough.
>
> You'll hear some broadcasters saying, 'What do you think about that?' or 'You might have a different view, give us a call . . .' To me it's not as effective as saying, 'Here's what I think, that's my opinion and I'm sticking to it.' Talkback callers will respond to that more effectively and you will get calls without having to solicit them.
>
> The editorial should be self-contained, it should have an introduction, a main body and a completion. The introduction may sometimes flow into the main body—it does not have to be an essay. The introduction says 'This is what I'm here to talk about and here's my stamp on it'. The body of the piece develops the argument with facts and interpretation, and the conclusion is written in such a way as to evoke reaction and response.
>
> An editorial is usually over in one page of double-space 14-point font. When you extend to a second page it is usually self-defeating because it just becomes too long. Read it out loud and you'll know if it's too long. You put as much work as you can into it, depending on your deadline.

Kevin has been a writer and producer on a national commercial radio talkback show. He describes his daily routine:

> I began work at 5 am, bearing in mind that we went on the air at 9 am and you essentially read the papers—all the papers—identifying things that had some substance and some interest to the audience; and that changes depending on who the audience is.
>
> By about 6.30 am my offsider and I would compare potential stories and would divide them up—'you do the oil spill and I'll do the Republic'. Then we were effectively writing editorials for the next two hours. Editorials, as with any sort of writing—sometimes they fly. Sometimes you can do an editorial in five minutes, ten minutes, and it's there, the structure is there, you're happy with it. Other times you're thinking, 'that's not sitting

right, that's just not coming together' and you spend half an hour on it. It really depends on how many editorials you need.

We produced about twelve editorials per day, six each, for a three-hour show. Fewer if there was a more substantial piece. They might not all be used but they need to be there. It sometimes happens that the first call may well be someone who's got a story that hasn't been aired anywhere else. That's one of the beauties of talkback, stories break and evolve on air. People get in touch and say 'Hey, I've just experienced this' and you run with it, or the newsroom says there's been a jail break and we've got a reporter in a helicopter at the scene, so we ditch the other things we'd planned and go with the breaking story.

There are also interviews to prepare. Politicians, social commentators, guests, people who may enhance discussion of a particular subject or issue. That entails writing an introduction, or even an editorial on the issue for delivery before the interview, writing questions that listeners would want to hear asked and questions that will evoke a reaction, both from the guest and from the listener.

And, of course, there is a need to respond to issues raised by listeners during the show. Chasing information, confirming facts and figures, giving the broadcaster the information with which to respond to a point raised during talkback. That is one of the more immediate requirements during a talkback show.

Kevin wrote two editorials on the same topic, an oil spill in Sydney Harbour, as an example of different treatments of the same event.

Editorial (1):

What a day. Great day for a picnic. I *was* planning to have a picnic today. Down on the Harbour.

You remember Sydney Harbour. That cesspit, that sump that used to be the jewel in the Sydney crown. How, in this day and age, how can anyone release 80 thousand litres of crude oil in the middle of Sydney Harbour.

80 THOUSAND litres!

Shell's apologised. They're sorry. Well, an apology doesn't clean up the mess, does it.

When it comes to oil spills in Sydney Harbour, apologies are for the birds. And that includes all ~~all~~ the sea birds soaked in crude oil.

You know, we spend months, years, educating people, telling them to look after our waterways. Little things. 'Don't pour your frypan oil down the sink – it goes into our waterways, onto our beaches, into our harbour.'

And that's for a *half a cup* of oil. Cooking oil.

80 THOUSAND litres! Crude oil. 560 barrels! Just open em up and pour em into the Harbour. Go on. Just make sure you say you're sorry.

Sure, they're sorry. They're sorry they could be fined up to a million bucks. UP TO. That gets cut back to about 50 grand after the lawyers have convinced a judge how sorry they are.

The *last* time Shell was fined for an oil spill at Greenwich . . . oh yeah, it's happened before – six years ago – only 10,000 litres that time – they were fined $42,000. Not quite a mill. And that really taught them, didn't it.

And even if they have to pay a million, what's a million dollars to Shell? Last year Shell made a $453 million profit.

Besides, they'll make ~~it~~ up. Put up petrol prices. Either way, *we're* the ones who pay. We're already ~~are~~ paying.

And judging by the putrid stench coming from Sydney Harbour, the price is already too high.

Editorial (2):

Time for a reality check.

I hate to spoil the party, I hate to interrupt the chest-thumping purveyors of environmental rage and moral outrage.

I hate to pour oil on troubled water, if you'll excuse the expression.

But it's not that bad. Really. Take a deep breath.

Sydney Harbour is not awash with crude oil. Surfers have not been riding waves of thick black oil off Manly beach.

Sure, some waterfront areas have been affected, but it's minor. And it's fixable.

You know how much wildlife has been affected? You know how many water-birds have been treated in this great disaster? Four. That's right. A fairy penguin and three cormorants. Do you know how many fish have died? Two. Four birds and ~~and~~ two fish.

Sure, there's been an oil leak. Sure, we prefer that this sort of thing doesn't happen.

But it's being managed. It'll be cleaned up in a matter of days. The Italian tanker company has admitted liability. Shell has assumed full responsibility, and has pledged to clean it up and pay all costs. No arguments.

The emergency procedures worked. The clean-up is efficient ~~or~~ and effective.

It's not the end of the world. And it's certainly not the end of Sydney harbour.

I know that will come as a great disappointment to those who have whipped themselves into a frenzy.

But they need to cool off. Take a dip in the Harbour. It's really not as bad as you think.

An example of the same event viewed from two different perspectives, but still using all the tricks of a talkback editorial: the emotive words, the asides and extra thoughts along the way. Each is written with a particular announcer in mind; a good writer hears the words in their heads in the voice of the presenter they are writing for. They use emotive terms, if that is the announcer's style, such as 'do-gooders' or 'tree huggers' or 'snivel libertarians'.

THE LIVE-TO-AIR TALKBACK PROGRAM

Generally, the open-line topics are set by the talkback announcer and worked on by writers and producers like Kevin Brumpton. Other topics can be raised as well. In setting up the topic for discussion, the announcer often presents an editorial that states the announcer's view, or the views of both sides of the argument. It should be done in a way that allows room for other views and invites listeners to share their thoughts on the subject. These editorials are often highly controversial in nature in order to elicit a strong reaction. If the editorial is too bland, you risk no listeners calling. In fringe listening times this is a real possibility.

Having set up one or more topics, the announcer takes a short break with a jingle, ad, music or comments from an expert. This allows listeners time to call. The producer of the program then vets the calls, selecting the best callers. Sometimes they look for articulate callers who can throw light on an issue; sometimes they look for callers who agree with the announcer, or those who give the announcer an opportunity for ridicule. Often all callers have their say.

Either by the use of the intercom feeding into the split-feed headphones of the announcer or by putting the information onto a computer prompt screen, the announcer can be made aware of what the caller is going to say and of their attitude to the topic. The announcer needs time and available resources to prepare an argument that makes the program sound informed. The listener is not often aware of how much instant research and preparation is done by the announcer and by the production team before the call is put to air. A production team should have basic resources like encyclopaedias, dictionaries, internet, and other references available to them so that they can prepare well enough to interact successfully with the caller on air.

Listener comments via SMS text message are also valuable, and can contribute more depth or a counter point of view from people who do not want to be heard live on air.

The last-minute research helps to create the myth of the talkback announcer as some sort of all-knowing, all-powerful voice. With information on the caller available to you, you are in the position to make informed decisions about the way the program will flow.

Who is next?

You may decide to 'hold' a while before talking to line four where the caller wants to know when Michael Hutchence died. Once your producer or assistant has time to find the answer; you can then take the call. At first, do not sound too confident about your answer; pretend that you are having to dig up the elusive date from the back of your mind. Or maybe you prefer to come clean from the outset, introducing the caller and declaring that you do not have the answer. If so, you more than likely will have other callers who respond to the unanswered questions.

Knowing the name and topic of interest of the caller allows you to introduce the caller by saying, 'Next caller is June. You want to talk about rail delays.' Or you may choose not to use names, or give any reference to the topic to be discussed. However, once you introduce the caller ensure that they are aware of it. You or your producer should tell callers how they are to know that they are on air. Some announcers merely say 'hello', so the caller on line five needs to know that he or she will be the next person to have 'hello' said to them.

Once the caller is on air, you are still in charge. You can silence the caller while they are talking. By using a 'mute-to-call' button you can talk over the caller without them being aware of it, but many broadcasters would frown upon this approach. If the caller says something you do not want listeners to hear, the 'delay' function gives you seven seconds to kill it before it hits the airwaves.

One trap in talkback is when the announcer is asked 'How are you?' by each and every caller. It is important that each caller is told beforehand not to ask after the announcer's health or similar pleasantries unless there is a particular reason. Callers can then simply say 'hello' and get on with the conversation. Enquiring about the health of the caller can also be a dreary exercise and, in the main, probably not worth doing.

The end of the call should be equally smooth and tidy. Some announcers like to end the callers before they have a chance to say goodbye. You can do this by responding to their last point, taking the telephone fader down and cutting them off.

We have seen how talkback announcers have enormous technical power over callers. They also have emotional power. Announcers are experienced in speaking on air. It is their program, and they are at home and very comfortable. A listener, on the other hand, is nervous and often ill at ease. Talkback announcers can either help callers relax, by chatting in a non-aggressive style, or make callers more nervous by badgering them. This power is frequently used, or abused, to entertain listeners: one caller is happily sacrificed to entertain thousands of listeners. In the end, however, the nature of the program should dictate the manner in which the callers are handled.

You are in the studio. You have a caller. You have all this power. You have researched your topic . . . now, what are you going to do? You know how to put the call to air. You know how to start a conversation and you know how to end it. What about the conversation itself?

The art of listening

In talkback formats an empathy with the caller is important. You must listen and try to understand the other point of view and have a sense of curiosity about what each caller has to say. Then you can elaborate on it or criticise it.

> *Alan Jones (2GB):* 'The first element is being able to listen, given that in talk radio you're inviting people to ring . . . Much of my program material comes from my listeners.'
>
> *Sandy McCutcheon (Radio National):* 'A good talkback presenter has the ability to listen and, if necessary, concisely précis what has been said, so that the heart of the issue is kept to the forefront.'
>
> *Tony Delroy (ABC Local Radio)* speaks of creating an atmosphere of 'good humoured banter between the callers, and a commitment to respecting other people's views, even if you don't agree'.
>
> *Brian Wilshire (2GB):* 'The broadcaster, in time, becomes almost a member of the listener's family; little is demanded of him or her, as long as established standards of manners and behaviour are adhered to.'

It is important to think about these questions: Should the caller be the star? What is the caller's role? At times the caller might be the star; at other times the caller's role could vary as scapegoat, or expert, or informer, or comedian, or any of a number of other roles.

John Laws has suggested that you should 'play the caller'. This is something all talkback announcers do. Some play the callers in order to bring out their opinions and to elucidate their views. Some play the callers to try to trap them into saying something embarrassing. Some play the caller for laughs. Some play the caller into agreeing with the announcer's opinion. Some will play one caller off against another. This is where the entertainment value is generated. A dull call can be turned into a fascinating call if the right question is asked or if the right button is pushed, forcing the caller to react strongly. This ability to play calls comes with experience. The better you listen, the quicker you learn these skills.

It is vital that you remain in control at all times, even though you may be reading a news item or script. You may have a producer talking in your headphones while you're looking at the monitor to see who the next caller is, with a guest being seated, and a mic being plugged in, all at the same time. No matter what else is going on, you must always concentrate on what the caller is saying.

THE FUTURE OF TALKBACK

The dominant style of commercial talk radio heard on stations like 2UE, 2GB, 3AW, 5AA, 6PR and others has grown strong thanks to older listeners who were brought up to respect authority—and many of the talkback announcers assume the role of authority figures. When these listeners were growing up radio was special, the first electronic mass medium, but children of the TV generation hold radio in much less awe.

The next generations have less respect for authority, less time to listen and more media to choose from. They are also more aware of the tricks behind the media. Successive generations of Australians are reaching ever higher levels of education and children are being taught to deconstruct the media from as early as primary school. So talk radio presenters for the next generation will have to think about how to adapt the format in both style and content for new generations.

Talkback is now part of FM breakfast shows and podcasts. Some of it is serious and some frivolous. 2UE's Paul Murray, who combines serious interviews with fun and music, says the next generation wants a combination of FM style fun plus serious content.

'I honestly believe there's got to be somewhere for people to go when they have outgrown stunts and moral dilemmas, but don't want to listen to AM talkback. That's were I come in, a head that's in the news, but both feet firmly in the world of fun.'

USEFUL WEBSITES

<www.3aw.com.au>
<www.2gb.com>
<www.2ue.com.au>
<abc.net.au/rn>
<www.fxrs.com.au>

14. RESEARCH AND PROMOTIONS

David Rogerson

Research plays an important role in many facets of a radio station's operation, including promotions, sales, marketing, music directing and programming. This chapter, read in conjunction with the following chapters on sales and programming, should help you develop a deeper understanding of some of the important elements that underpin radio business models.

THE ROLE OF RESEARCH

In sales and marketing, station management use ratings results to gain an understanding of who and how many people are listening, and at what times of the day. This type of information assists the station's sales and marketing department in selling the benefits of their station to advertisers (see Chapter 15 for more on radio sales). Research is used in promotions, music directing and programming (see Chapter 16 for more on programming) to inform decisions about what listeners like to hear, with the aim of achieving the highest possible listenership.

Ratings research, which is undertaken among a random sample of respondents across a station's listening area, tends to be the domain of larger capital city and regional markets and is most often subscribed to by commercial operators and the ABC. According to Nielsen Media

Research, weekly commercial radio listening is about 76 per cent of the population, making ABC listening around 24 per cent of the population. Nielsen surveys show that most people listen to the radio at home (49 per cent), followed by in-car listening (32 per cent) and then at-work listening (17 per cent). In Australia total radio listening, as measured by Nielsen surveys averaged across the five main capital cities, is about 20 hours and 30 minutes per week.

Radio industry bodies have a code of ethics they require subscribing stations to adhere to. The code helps to govern and maintain consistency in the way in which data is presented to advertisers and the wider community.

Community radio stations often cannot afford or are unable to access such ratings information. In fact, it is breach of copyright to use this research data unless your station is a bona fide subscriber. Stations in non-rated markets, or stations which do not participate in the main commercial and ABC ratings surveys, often use other research information to assist in their marketing proposals and strategic planning. A recent study for the community radio sector by McNair Ingenuity found that 24 per cent of Australians over 15 years of age listen to a community radio station at least once a week. These figures are not directly comparable to the Nielsen research.

Additional sources of information about your audience include the Australian Bureau of Statistics (ABS), local shire councils, planning authorities and learning institutes, which can all provide research about your station's local area. These can be useful in preparing information that provides details of the types of listeners your station can potentially reach. For example, in rural areas the ABS can provide data broken down by local government areas, based on information gathered in the census. This can be useful in determining how many farms may be in your broadcast area, how many people within a specific age group reside in your area, the number of vehicles owned, and so on.

It is important to remember that when data such as this is quoted in proposals, or detailed in station marketing literature, the source of the information must be clearly detailed.

The two main types of research are quantitative and qualitative. They are detailed in the sections that follow.

Quantitative research

As the name suggests, the data collected by this type of research attempts to provide a quantity or whole numbers approach to the outcome. In other words, a quantification or percentage of people who listen to a particular station, like a certain song and so on.

Since the very first census was taken way back in biblical times, rulers, governments, marketers, media outlets and a plethora of other organisations have been counting people. Whether the information gathered had the objective of finding out how many people lived in a city, how many people live in a household or how many consumers may think a certain way about a product or service, quantitative research has been around for a long time.

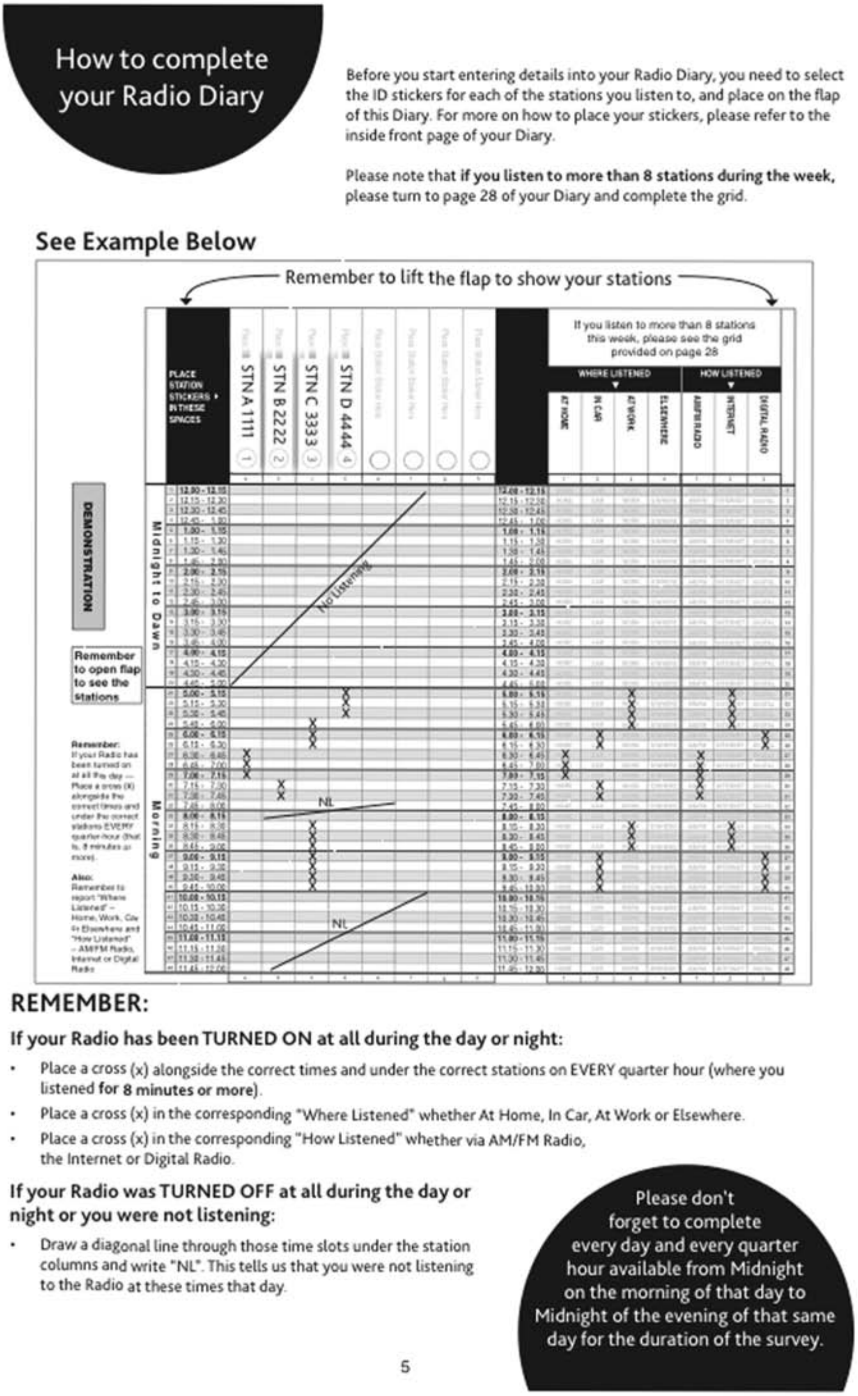
Some of the quantitative methodologies used for radio research include:

- Door to door—where researchers knock on doors to find out what radio stations people listen to.
- Diary-based research—where a small diary is provided by a research company representative visiting randomly selected households. One or more household members are provided with their own diary to complete over a seven-day period. They tick the radio stations they listen to each day and also tick the times their individual listening took place and how they listened; for example on AM, FM, internet or digital radio.
- Telephone tracking research—where radio listeners are asked what station they have listened to in the previous 24 hours, or sometimes in the past week.
- Telephone music research—where radio listeners are asked to listen to short 'hook lines' or music excerpts played down the telephone to them. A series of songs is heard sequentially, with the telephone respondent asked to rate each song by how much they would enjoy hearing it on the radio.

Programmers and management use this data to help identify the strengths and the weakness of their station.

Throughout the 1960s Australia had the services of two media research companies—McNair and Anderson. Both provided diary-based research to the industry. These two companies later merged to become McNair-Anderson and were at the forefront of diary-based research throughout the world. Initially, radio research was provided to radio stations four times per year but, as the diary methodology research evolved and stations needed more information, so too did the need for more frequent ratings information.

Today, radio stations in Australia's major capital cities of Sydney, Melbourne, Brisbane, Adelaide and Perth receive eight survey reports a year. The diary is still personally dropped off to households and collected by a field representative of the research company, currently the



How to complete your Radio Diary

Before you start entering details into your Radio Diary, you need to select the ID stickers for each of the stations you listen to, and place on the flap of this Diary. For more on how to place your stickers, please refer to the inside front page of your Diary.

Please note that **if you listen to more than 8 stations during the week,** please turn to page 28 of your Diary and complete the grid.

See Example Below

Remember to lift the flap to show your stations

PLACE STATION STICKERS ▸ IN THESE SPACES

STN A 1111 ①

STN B 2222 ②

STN C 3333 ③

STN D 4444 ④

If you listen to more than 8 stations this week, please see the grid provided on page 28

WHERE LISTENED ▼

AT HOME

IN CAR

AT WORK

ELSEWHERE

HOW LISTENED ▼

AM/FM RADIO

INTERNET

DIGITAL RADIO

DEMONSTRATION

Midnight to Dawn

Morning

No Listening

NL

NL

Remember to open flap to see the stations

REMEMBER:

If your Radio has been TURNED ON at all during the day or night:

- Place a cross (x) alongside the correct times and under the correct stations on EVERY quarter hour (where you listened **for 8 minutes or more**).
- Place a cross (x) in the corresponding "Where Listened" whether At Home, In Car, At Work or Elsewhere.
- Place a cross (x) in the corresponding "How Listened" whether via AM/FM Radio, the Internet or Digital Radio.

If your Radio was TURNED OFF at all during the day or night or you were not listening:

- Draw a diagonal line through those time slots under the station columns and write "NL". This tells us that you were not listening to the Radio at these times that day.

Please don't forget to complete every day and every quarter hour available from Midnight on the morning of that day to Midnight of the evening of that same day for the duration of the survey.

5

Sample radio diary page

Nielsen Company. In some countries, like the USA where Arbitron Inc is the major supplier of radio research, diaries are mailed to households in advance. The diaries are completed by household members across a pre-designated week, and then returned to the research company via a return reply envelope.

In Australia, the method of calculating the data and the provision of new listening profiles has changed over the years. What were once described as 'Housewives', for example, are now described as 'Grocery Buyers' to reflect the fact that both females and males buy groceries. Changes to survey reports introduced in 2010 dropped the Grocery Buyer category altogether to make room to split the older 55+ age category into two segments of 55–64 year olds and 65+ year olds, reflecting different spending patterns in older demographics now that people are living, or working and spending money longer than ever before.

The frequency and style of reporting ratings surveys has also evolved. Station managers now receive a series of rolling data reports, which means that the survey data overlaps some weeks, rolling out more consistent reports than in the past. Five short breaks throughout the year enable on-air personalities to take holidays in what the industry calls an 'out-of-survey period'.

On average, radio stations and advertisers now receive data every six weeks, reporting on the success of their sessions, demographics and other profiles of radio listening for the given market. The collection of data begins in the third week of January and continues until the first week of December, with the final report delivered in mid-December.

Once listening data is collected and entered into the research company's computers, it is provided in a software format to those companies subscribing to the service. Stations then upload the latest data into their own computers to analyse it in order to understand the radio listening behaviour within their market and present it to advertisers.

The changing face of research technology

With the advent of digital radio, internet streaming and the increasing numbers of stations in each market, researchers have begun using new technology to capture radio listening habits.

The traditional radio diary, while still a respected method of collecting data, is now challenged by the number of radio stations it has to potentially include in its printed format. Rapid advances in broadcast technology and improved reporting by competitive media such as television and the internet have further increased pressure for new approaches to radio audience measurement. Television ratings in Australia, for instance, use electronic people-meter technology to measure when people are watching, and websites track page click movements in great detail.

Consumers can choose from an array of radio, television, cable, satellite and internet services tailored to their individual tastes and needs, and those choices are growing daily. It is increasingly difficult to measure the changing media landscape now being offered to listeners using current standard ratings systems such as personal radio diaries, telephone recall interviews and household diaries. New measurement devices are the next phase of development in the evolution of radio ratings measurement.

Research companies like Nielsen Media, Arbitron and GFK have been developing and evolving digital-based radio measurement devices since the early 1990s. These systems use audio matching or inaudible embedded codes to capture the sounds that listeners are actually hearing.

New devices include Arbitron's Portable People Meter (PPM), and Nielsen Media's wrist watch (originally developed by Telecontrol Switzerland). Each company's portable audience measurement devices are either worn or carried by a representative sample of listeners during the survey periods. Other companies have also developed similar listening and recording type devices in mobile phones, however, these have not yet been as widely accepted by the industry.

In Europe, Arbitron began rolling out its PPM services which were able to combine both television viewing and radio listening in the early part of the 2000s.

A media meter watch (left) and a Portable People Meter (right)

As for other research technologies, the internet has developed a totally new business model for researchers and stations alike. Today, radio stations can collect a database of listeners via the individual station's website (while observing privacy policy legislative requirements). These databases can in turn be used to email questionnaires to listeners, ask for feedback on songs a station is currently playing or considering for airplay, seek feedback on on-air personalities and a whole range of other related information.

Social network interaction on the internet between the station and its listeners has personalised the way management stays in touch with consumer needs.

Qualitative research

Qualitative research is generally concerned with answering the questions 'why' and 'how', rather than 'how many'. It seeks to understand attitudes, perceptions and behaviour. It assists in explaining what motivates the customer, in this case your radio listener.

Focus groups are particularly valuable in eliciting a wide interchange of thoughts and opinions as their informal atmosphere encourages spontaneous response. They provide an environment where relevant issues that might not have been considered often arise. They can therefore be a rich source of creative ideas to assist marketing and strategy development. This environment is not readily available using alternate quantitative techniques.

In a focus group, a trained moderator is used. Often with a background in psychology, human resources or similar human behaviour analysis, their role is to objectively guide the discussions based on a series of general areas a radio station may wish to cover. The moderator has to possess the ability to be completely removed from the emotions and comments participants may make about a particular station or its competitors.

Qualitative focus groups also offer the opportunity to hear and understand the issues being discussed in 'the language of the listener'. This not only helps radio management understand the way its listeners express their feelings toward their station or competitors, but helps to identify key words and 'hot buttons' that can be used to develop the most appropriate marketing criteria.

Focus group participants are often recruited by an independent research recruiting company. A specially designed focus group moderation room is used where the moderator sits around a table with approximately six to eight attendees who participate for about one hour. At the completion they are usually given either a gift for attending or cash to cover their time and travelling costs.

The moderator will have a series of discussion points which have been developed in collaboration with the radio station management, around which feedback is sought. A moderator does not necessarily ask a series of questions based on these discussion points and then wait for individual respondents to reply. That's where quantitative research previously outlined would be more beneficial.

Focus group moderators tend to ask open ended questions, that is, questions that do not necessarily require simple yes or no answers. Often they are questions that start with words or phrases like:

- Who do you like listening to on this station?
- What types of contests do you like on the radio?
- Why don't you like that particular show on the radio?
- When would you decide to tune back in to this show?
- Where are you located when listening to sport on the radio?
- How did you find out about a particular personality?

This style of questioning offers the opportunity for wider discussion and the raising of issues among other participants, and enables more discussion as opposed to individual input and response.

These discussions also assist management in understanding what the real issues are, and how to best go about internally putting the most appropriate management response in place to address the issues in a timely fashion.

The role of the moderator is to obtain information. Their training has enabled them to guide respondents using a series of questions within a limited framework to get specific answers that provide illumination rather than just measurement. The goal with focus groups is to provide indicative information regarding key issues.

Given the experience and background required to moderate and facilitate, it is easy to see why the moderator should not be a member of station staff. Equally, staff should not sit in or be part of the group discussions where listener involvement and interaction is required.

Focus group sample sizes

Six to eight people, selected properly, is ideal for a focus group. Groups of nine or more are not considered necessary nor will an increase in numbers provide any further valuable information. In fact, quite the opposite is true. Apart from the fact that no greater statistical validity or relevance is gained, increased numbers of participants mean that a true moderation of discussions is less likely to take place.

Larger groups unavoidably encourage human nature to emerge whereby people within a larger group compete with each other for opinions, views and dominance over others, while others sit back and withdraw. The dominant respondents take over discussion with comments which can verge on the irrational/subjective as opposed to rational/objective comments.

Smaller groups enable the trained moderator to more closely monitor and manage such extreme human behaviour while 'guiding' the direction of the discussions within the structure of the project's objectives. This is one of the reasons why trained moderators tend to have a background in psychology and/or human behaviour sciences.

People often ask whether a focus group of six to eight people can provide 'the numbers' required to make informed decisions arising from the study. Perhaps the most important point to consider in focus group methodology is that focus groups are not designed to produce projectable information. They are directional, not projectable; indicative, not quantitative. Focus groups are not more projectable by adding more focus groups to a study nor by adding further people to each group. This is true regardless of how many groups are completed because the group conditions vary.

Doing your own research

Undertaking research requires precision. It is a science, not necessarily an art. Research is not designed to be a panacea to everything in solving, resolving or confirming the key issues station executives may feel are pertinent, but it is certainly a valuable tool. Like a lamp post, it helps to illuminate what is happening in the market, to guide the way ahead for decision making.

Following are some simple tips to observe if you need to undertake your own in-house research. Before you begin:

- *Decide on the objectives of the research.* Also decide what you are going to do with the data. This helps determine the information you need to collect and the questions you may need to ask.
- *Set a budget.* Generally, the quality of the research will be proportionate to the money you are able to commit.
- *Decide on the* ***appropriate*** *methodology.* Some stations may not be able to undertake a diary study, so an internet-based study could prove to be a more cost effective methodology.
- *Review sample quality.* People who register on your station's database are not a truly representative sample of your wider potential audience. Be wary of how you intend to use data based on such a sample.
- *Review sample quantity.* How many people do you need to contact and include in the sample? As a general rule of thumb, the more you intend to slice and dice the data, the greater the sample size you will need.

Research 'dos and don'ts'

- *Do abide by the laws and rules of the land*—as an example telephone research can be effective, but can also be seen as intrusive by some householders as the Do Not Call Register limits those who wish to be contacted. Internet based research also requires the option for the person taking part to opt in or opt out when contacted.
- *Do engage the services of a professional expert*—someone who has the experience to assist you undertaking the type of research you require. They may be on staff, a market research company or via a local university or college in your area.
- *Do consider research providing the blueprint for your success*—this is vital as research outcomes assist in developing the foundation for making decisions and setting your forward strategy. In turn, everyone involved in the project should understand that the rules of sample size, quality control and objective analysis are vital if you are going to make critical business decisions based on implications from the data.
- *Don't assume you know everything*—in the end, research often raises more questions than it set out to answer. Be open minded to what your listeners and the wider market is saying.
- *Don't just stick the answers to the research on air*—research is there to illuminate, not lean on. The outcomes need to be considered within the context of how your station wishes to evolve or possibly update its strategies.
- *Don't deny the importance of regular and timely research*—the worst case scenario would be your competitors knowing more about your station than you do. Research relates to a given moment or period in time. Research that is five years old does not reflect the current state and conditions of your market. As time changes, so too do attitudes and perceptions of listeners.

Why buy radio?

Research can help to answer important questions posed by advertisers about why they should buy advertising on radio.

Listener loyalty

Radio listeners are loyal to their personal radio choice. Many listen exclusively to one station and most have regular listening patterns throughout the day. Radio's relationship with its listeners helps businesses to start and develop a relationship with them too.

Live and immediate call to action

On average, consumers are exposed to more than 3000 advertising messages every day on billboards, on air and online. Many of these messages occur at times when, and in places where, listeners cannot respond to the message. If you want your advertising investment to work it is important to deliver timely messages that cut through the clutter. Radio delivers timely and relevant messages that generate response.

Flexibility

With radio, clients can be highly flexible with both the schedule and the creative message. You can change the campaign at very short notice in reaction to consumer response or to other factors like weather, last-minute sale clearances, and so on. With TV and print, higher production costs mean longer lead times are required to change a schedule or commercial message.

Long time spent listening

Radio's portability and mobility mean there are many opportunities to listen: at home, in the car, with friends, at the beach, or over the internet. This means that many key consumers spend much more time with radio, particularly between 9 am and 5 pm, a key buying time when retail outlets are open and ready to respond to a customer's needs. It is the ideal medium for clients to target their message to potential customers within the environment or at the time of day they are listening.

Radio is a good final reminder

Prior to shoppers making their purchase decisions, the high penetration of radios in vehicles makes radio the ideal final listening medium of choice prior to leaving the car and heading to the store.

RADIO PROMOTIONS

After researching the audience your next step is to promote your station and sell your advertisers' products. This section deals with promotions and the next chapter is about selling radio advertising.

The promotion's primary role is to generate and create awareness of a program or product, hopefully via a creative message and concept.

There are many memorable radio promotions that continue to remain in listeners' minds even years after the promotion or special event has long since gone. One memorable radio promotion in Sydney involved 2SM breakfast announcer Ian MacRae, who claimed he would be putting a jumbo under the Sydney Harbour Bridge. Listeners lined the shores of Sydney Harbour on the fateful day to witness what they believed would be a major fly-past of a jumbo jet. What many had failed to do though was check their calendars first. The jumbo promise was made on 1 April, better known as April Fools' Day. Ian had arranged for a jumbo (in the form of an elephant) to be placed on a barge and floated under the Sydney Harbour Bridge.

For 2SM the impact was incredibly powerful. It created that all important word of mouth for days, months and years, reinforcing radio's ability to paint pictures in the mind and capture the imagination of listeners.

Perhaps the most famous, albeit unintentional, programming promotion event was the epic *War of the Worlds* featuring noted actor and director Orson Welles. The fact that so many people actually believed their homeland was being attacked by aliens from out of space, despite the fact the show was only a radio play, again only serves to reinforce the strong emotive impact and connection radio can have on listeners.

Promotions on radio tend to broadly fall into two categories:

1. sales promotions; and
2. programming promotions.

Sales promotions

Sales promotions are usually generated via the sales or marketing departments of a radio station. These types of promotions involve advertisers with the common goal of selling product and raising awareness of the advertiser. The difference, however, is that the sales promotion is normally accompanied or scheduled across the same period as a corresponding on-air advertising schedule for the client. In effect, the promotion adds strength to the advertising schedule.

A radio station's marketing executive will arrange for a promotional tie in with the client's on-air advertising campaign. These types of sales promotions take many and varied forms and are tailored to meet the marketing strategies devised for the client. They can include special promotional events like in-store appearances from station personalities, or giving away client product on air in the form of a contest.

Some stations, via their programming and/or sales department, may limit the number of contests and promotions that can be run on air at any one time. This ensures the client receives a clear and uncluttered environment in which their promotional campaign can be heard. Station policy will also often dictate that the promotional campaign has an equal or similar financial value placed on it to the client's on-air advertising schedule.

Programming promotions

Programming promotions tend to be driven from within the station, emanating from the program director's office, often in consultation with the promotions manager and possibly a promotions team.

Programming promotions are exactly what the name suggests. They are designed to highlight or promote specific needs or areas of the station's programming schedule. A good example may be a program director who identifies that the breakfast show has been trending down in overall audience appeal. A decision is made to devise and prepare a promotion that is specifically designed to lift the profile and number of listeners tuning into the breakfast show.

The promotion would have the goal of reaching current and potential listeners to spread the word about the program. A contest element may be added to the programming promotion, which in turn could be supported by external marketing such as newspapers, outdoor, website, or local television.

Due to the tighter financial environments stations operate within today, the programming promotion may also offer opportunities for clients to be involved. This is so the programming promotion concept is self-funding. In this case, the programming department would work closely with the sales and marketing departments in preparing a proposal and would assist in selling the programming promotion concept to potential clients. Advertising support of promotions should be declared to listeners.

Promotions 'dos and don'ts'

The role and conduct of promotions both on and off air are bound by a range of codes and practices. In most states and territories around Australia, you will require a permit from the relevant gaming authority to conduct a promotion involving a prize giveaway over a certain amount of money.

It is important that you look into the specific laws in your market well in advance as some government agencies require a minimum period of notice in order for the necessary application forms to be lodged, assessed and approved.

Promotional contests must observe the relevant provisions laid down in your industry's codes of conduct. This includes what has come to be known as the 'cash for comment' provisions, which prohibit unacknowledged personal gain. In short, no one within a radio station is authorised to promote or give away product on air without the approval of the relevant department manager within the station. If you hold an on-air position within a radio station, it is best to check first with station management before attempting to give away or promote a client's product or service on the air no matter how innocent the promotion or endorsement may seem to you.

A 2010 study by the Australian Communications and Media Authority found that 75 per cent of people agreed that advertising content should be clearly distinguishable from other content. The regulator is likely to watch closely for any breaches of disclosure rules, so ensure that you inform your listeners honestly and openly about who is paying for messages that go to air on your station.

The commercial and community radio sectors have specific codes of practice relating to disclosure, so ensure you are aware of them before embarking on an externally funded promotion. ABC Radio is prohibited by its charter from engaging in paid promotions, while SBS Radio, which is semi-commercial, is able to accept paid promotions under guidelines set out in its charter.

A good promotion:

- contains an element of creativity and imagination;
- is simple to enter and participate in;
- is tailored to suit the direction that the station is taking;
- is fully explained to listeners and well arranged;
- is fully explained to participants and station staff; and
- achieves the station's overall goals for improving listenership.

Using your brand for successful promotions

Marketing expert Matthew Ragas, speaking at the NAB Radio Show in the United States, says: 'In a time of shrinking media budgets and clutter, cult brands have a big market advantage [because they can help businesses] lock in repeat customers.'

Explaining the psychology behind the success of cult brands such as Harley-Davidson or US broadcaster Rush Limbaugh, Ragas told Radio Show delegates:

> In the face of a fragmenting society, the people we studied told us that they wanted to fit in and have an identity. Every cult brand we've studied finds a way to fill this void . . . They are not just selling a product, they are selling a sense of belonging.

He believes radio stations which interact with their audiences in the right way, and bring their listeners together to form self-supporting communities, can achieve cult brand status by fulfilling the basic needs of 'belonging and being loved'.

'People want to make a statement about who they are by what they listen to,' he says. In Australia an example of what Ragas is talking about is seen at ABC 702's knit-in, where the station taps a groundswell of listener enthusiasm and brings its 'community' together for a charity knitting event in the station's foyer. Facebook, Twitter and other social networking sites are now an integral part of forming and maintaining listener connection to your station and turning them into your 'brand champions'.

Ragas's seven tips for creating a cult brand, in his book *The Power of Cult Branding*, are:

1. consumers want to be part of a group that's different;
2. cult brand inventors show daring and determination;
3. cult brands sell lifestyles;
4. listen to the choir and create cult brand evangelists;
5. cult brands always create consumer communities;
6. cult brands are inclusive; and
7. cult brands promote personal freedom and draw power from their enemies.

USEFUL WEBSITES

<www.acma.gov.au/WEB/STANDARD/pc=PC_100642>
<www.acma.gov.au/WEB/STANDARD/pc=PC_311945>
<www.arbitron.com>
<www.au.nielsen.com>
<www.cbaa.org.au>
<www.cbonline.org.au>
<www.commercialradio.com.au>
<www.mcnairingenuity.com>
<www.nab.org>
<www.rab.co.uk>

15. RADIO SALES

David Maxwell

FUNDING THE BUSINESS

A radio station, whether it be a public, community or a commercial broadcaster, is a business that requires funds to operate. They need funds to generate content, buy equipment, pay the staff, buy the outside services and pay the power bill to keep on the air. Public broadcasters such as the ABC and SBS are funded by taxpayers. The commercial and community sectors depend on revenue which they generate.

For public broadcasters, funds come from a government grant with specified requirements for the broadcaster to meet in order for the funding to be continued. Public broadcasters augment this funding with actions and activities such as selling merchandise associated with the radio station. An example is the products offered through ABC Shops which are predominately created from the content produced by ABC radio and television stations. The ABC is prohibited from advertising but SBS, which receives less government allocation, is allowed to supplement its funding with advertising.

For community broadcasters revenue comes from fundraising and donations, subscriptions and sponsorship. There are limits to the amount of sponsorship a community broadcaster can put to air, currently set at five minutes per hour. Community stations are not allowed to advertise.

For commercial broadcasters revenue comes from the sale of commercial airtime to advertisers who buy time on the radio station to promote their products and services to the station's audience. These types of sponsors and advertisers fall into three broad categories:

1. local advertisers such as a tyre dealer, a pizza store or hairdresser in a local market;
2. national advertisers who own and promote products with brand names such as Gloria Jeans coffee, Sanitarium Health Foods, or Harvey Norman; and
3. multinational advertisers who own brands such as Coca-Cola, Nescafé, Shell and McDonald's and who advertise throughout the country.

This chapter examines how revenue is raised from local national and multinational advertisers. Successfully selling radio involves generating revenue through radio sales by providing the advertiser with an effective way to reach *their* audience through the audience *your* radio station attracts. The structure of the radio sales departments and the steps for selling radio advertising time are also covered in this chapter.

MORE THAN JUST RADIO

Radio advertising today is much more than just a message of a given length of time broadcast by the radio station. Today radio advertising is about supplying multimedia and multiplatform solutions to an advertiser to promote their products and services to a desired audience.

Reporting Austereo's half year results in 2010, Executive Chairman Peter Harvie said that over 30 per cent of Austereo's advertising campaigns now contain more than just radio airtime. They also integrate advertising across station websites, product sampling, sponsored shows, sponsored digital radio channels and other non-radio platforms for their clients. Integrating multiplatform solutions with traditional radio advertising is essential in today's radio sales environment.

The market for selling radio

The radio marketplace divides into three basic areas:

1. metropolitan is defined as capital cities where there are many stations and is a very competitive environment;
2. regional markets such as Newcastle, Canberra, Townsville and Hobart with multistation operations and slightly less competition; and

3. country markets such as Bunbury, Launceston, Bathurst, Mildura and Charters Towers where there are mainly single owners with two frequencies.

Commercial and community radio stations operate in these marketplaces as business entities endeavouring to attract their target audience. Public broadcasters also have local stations competing for the local audience in these marketplaces as well and provide serious competition for share of listeners.

Commercial radio stations have only one source of revenue, the sale of advertising time to local and national marketers. To achieve this revenue all commercial broadcasters have sales departments whose objective is to identify prospective advertisers and offer them the opportunity to promote their products and services to the station's audience. Selling radio airtime is exciting, enjoyable and at times frustrating, but is essential for the survival of the radio station.

Before examining how radio airtime is sold let us review the ownership of commercial broadcasting stations. Ownership impacts on the sales structure examined later in the chapter.

Commercial radio ownership

The major national metro radio networks are:

- *Austereo*: Today and Triple M on FM. Radar and Jelli on digital radio.
- *DMG Radio*: Nova, Classic Rock, Fiveaa, Star104.5 on FM. Koffee and NovaNation on digital radio.
- *ARN* (Australian Radio Network): Mix, Classic Hits, the Edge, Cruise1323 on FM. Classic Hits+, Mix+ and the Edge on digital radio. ARN's parent company also owns outdoor advertising and regional newspaper businesses.
- *Fairfax Radio*: talk stations 2UE, 3AW, 4BC and 6PR. Music stations Magic 1278, 4BH and 96FM Perth. The Buckle country music station on digital radio. Fairfax also owns major daily and weekly newspaper brands.

Other stations and regional networks:

- *Macquarie Radio Network*: 2GB and 2CH Sydney, 3MTR Melbourne.
- *Broadcast Operations Group, Super Radio Network*: 2SM Sydney plus stations in regional New South Wales and Queensland. The Gorilla and Zoo channels on digital radio in Sydney.

- *Grant Broadcasters*: stations located through regional Australia, with brands including Power FM and 2EC. Local and country music stations on digital radio in Perth. Joint ventures with Kevin Blyton stations in Canberra and Cooma.
- *Southern Cross Media Group*: radio stations located throughout regional Australia, with brands including Sea FM and Hot FM. The company also owns regional television stations in many markets.
- *ACE Radio Broadcasters*: operating station in southern New South Wales and regional Victoria with brands such as Mixx FM and 3CS.

In addition to these networks there are a number of independent owners located throughout regional Australia. In all there are 284 commercial broadcasters and some 320 community stations competing for the dollars invested in radio advertising.

The sales department

The sales department is the revenue hub, selling advertising in a commercial station or sponsership announcements in a community station.

The title given to a radio sales person varies from market to market and from station to station. Some are called sales representatives, some marketing executives, others account managers or account executives. Whatever their nomenclature they all have the same primary task: to build a client base and generate revenue for the radio station.

The average sales department is made up of sales managers, account managers and sales assistants. The number of each depends on the size of the radio station and the market in which it operates. Metropolitan and network stations will have larger teams, some focused on agency sales and some focused on the direct market.

In regional and country stations the number of sales staff will be lower than in the metropolitan markets and their primary focus will be on gaining advertising sales from their local markets.

In metropolitan stations the sales department may be split into direct and agency sales, which may also include the network sales team. The direct sales department is responsible for gaining revenue directly from each company, whereas the agency/network sales team concentrates on generating revenue from advertisers who prefer to use a media or creative agency to plan and execute their advertising activity.

An example of a direct advertiser doing business with the radio station on a one-to-one basis is the Harvey Norman retail store chain. Harvey Norman plans and buys all their advertising requirements in-house; they do not use outside advertising agencies. For radio, networks and local stations deal directly with the company at a national and local level. Storewide campaigns are planned and executed at head office, while local store events and activities are executed by local store management who work with the local radio station.

An example of an advertiser who uses a media agency to plan and buy their radio time is Woolworths Ltd. All their radio advertising time is bought by the company's media agency, which negotiates with the stations in the markets where advertising is required. This may involve the radio network's agency sales team negotiating directly with the advertising agency to cover all capital cities, or for a metropolitan market the local agency sales team. For regional and country markets the agency would generally buy through a representation company.

The radio representation company

The representation company is a company established to provide a sales presence in a market where, in this context, radio time is bought and sold on a station which broadcasts outside that market. For example, time is bought in Sydney by a media agency on behalf of its client who wishes to advertise on the Gold Coast. The radio station on the Gold Coast uses the representation company to act as its sales department in Sydney to gain that advertiser's business.

Southern Cross Media Group operates its own representation company called Regional Radioworks to provide this sales presence for its stations, and also represents other companies such as ACE radio. Other owners have established their own sales companies, such as The Radio Sales Network (TRSN), to ensure they also have a sales presence in the market. The radio stations provide support information to the sales companies just as they do to their own internal sales departments.

Reporting line

The radio account executive has a reporting line within their station. In metropolitan stations they usually report to an account manager, who in turn reports to a sales manager who reports to either a sales director or general manager. In regional and country stations there may be fewer steps in the reporting line and the general manager may also be the sales manager.

Selling radio is a team game. All departments of the station are involved at some stage of the sales and broadcasting process.

Direct sales

Here we examine the steps in the process of gaining direct radio sales. Selling to media agencies is examined in the next section.

When a person joins the sales team as an account manager they may be given a list of current or past advertisers (also known as clients) who have been active on the radio station. This list may have been created by former sales persons or the station management. The list details the advertisers by company name and address plus the name of the main contact responsible for the advertising decisions. The list may be housed in a contact database and may include the client's advertising history or it may be a paper file which has little information. Whichever way the list is given to the new sales person, it is expected the sales person will service these advertisers and gain new campaigns and add new business to the list.

The new sales person may also be given a 'territory,' which is a defined area in the town or city. Any advertising enquiries the station receives will be passed to the sales person who has responsibility for that territory to follow up and gain advertising revenue. All other sales personnel in the team are restricted from prospecting for new business in that territory or servicing any existing advertisers.

This method of client distribution does not apply to all stations; in metropolitan markets the station may keep a register of existing advertisers and if a prospective advertiser is not on the register they are considered unattached and therefore can be approached by any sales person.

Step 1: Identifying the new prospect

Prospecting for new advertisers is a primary role for the radio station sales person. New business, as it is called, adds to the station's total advertiser base and at the same time replaces those companies who decide to use other channels, close down, merge or just stop advertising. The sales person has a constant requirement to prospect for new business.

Prospects can come from many sources. As you go to work you see a new apartment block or office building under construction or about to be built. That is a prospect. They need to tell prospective buyers or tenants their building is available and when. A new model of car is being released in the near future, you have a dealer of that brand in your territory, so they are a prospect. You go to a meeting of the local chamber of commerce and meet local business owners; most are prospects. What is necessary once you have identified a prospect is to qualify them.

Step 2: Qualifying the prospect

It is important to ensure that the time spent prospecting for new business is well spent. This requires each potential prospect to be *qualified* to ensure they are worthy of your time investment.

For a new prospect to become a potential advertiser the sales person has to identify if the prospective company has the capacity to advertise on the radio station. They will need to meet criteria such as:

- Are they a business of sufficient size and stature to be able to use radio advertising in an effective manner?
- Does the product or service they offer have appeal to your station's target audience?
- Is the company able to meet the financial requirements necessary to pay for that recommended plan?
- Can the advertising decision maker be readily identified?

The criteria required will vary by market and station. If the prospect appears not to be able to meet the required criteria of identification set by the station management then it should be abandoned and the sales person should move to the next prospect. If they meet the criteria the sales person moves to the next step.

Step 3: Getting the appointment to investigate the company and find an opportunity

This step requires the sales person to meet with the client and conduct an investigation to identify the client's products and services in greater detail, their appeal/target audience and other information which can be used to provide the basis for a communications plan to be prepared by the station. This step is not about taking a station's product off the shelf and offering it to the advertiser as the solution; it is about understanding the client's business and creating an opportunity.

The first requirement is to get the appointment with the decision maker you identified during your qualifying step. Appointments will be gained if the client believes you have something to offer. That is, your approach must be *client focused*, not station focused.

Once you are before the client you need to ask questions about the business, its products, its customers and the sales cycle (which are the best months for sales and why, which are the worst and why). You are endeavouring to find out as much as you can about the business so you can identify the opportunity for your radio station to become part of the prospect's communication program.

This step has many different names, however, they are all focused on identifying the client opportunity and the reasons for it and this step leads directly to the solution

Step 4: Turning what you found out into a proposal

Now you have gathered useful information about the client's business you need to review it and determine how your radio station can provide a solution. Analyse your audience and the client's product or service. Identify the possible parts of the radio station format and audience that could be used to best advantage. You may need to prepare a brief to pass to the promotions or integrated solutions team to answer so you can provide a total proposal to your client. You also need to check with the finance department to ensure you have the right credit requirements. Once all these activities have come together and you have a proposal you move to the next step.

Step 5: Presenting the outcome of your investigation and how your radio station can make a difference

You now have a proposal which recommends how your radio station can reach the client's target audience with a relevant message enough times to make the audience take action. You are going to make a further appointment with the client and present your plan with a strong rationale as to why the client should adopt (buy) it.

You can use a number of presentation techniques, however, it is the content which is important to the client, along with the confidence generated by the sales person that the plan is right for that client.

An important part of your presentation is what is called 'the leave behind' or the written *proposal*. A written proposal demonstrates to the client you are a professional, that you have taken time to provide a solution which is relevant and actionable. It provides the road map for the client to follow and it details every step in the plan. Ensure your proposal is in language your client will understand; avoid jargon and acronyms which mean everything to you and nothing to the client. For example, within a radio sales team, BMAD means the station shift times—Breakfast, Morning, Afternoon and Drive—but to the client BMAD probably means nothing. The proposal should also contain the order for signature and the credit requirements for the client to accept the offer.

A good way to test the quality of the proposal is to ask somebody who had no previous knowledge of the discussions to read the proposal. They should understand the offer you are making and the rationale supporting it.

The proposal is also a reflection of your station. If the proposal exhibits signs of haste, superficial thought and carelessness then the station may be perceived similarly. A client turn-off! If it is a quality document it suggests the station is professional and the campaign is in safe hands.

Step 6: Ask for the order

Many a sales person comes to grief on this step. They fail to *ask* for the order. Say something simple to the client like, 'we can start next week' or 'the first commercials can go to air this Sunday'. Clients make buying decisions more quickly if the sales person asks them for a start.

Once the client accepts the offer you need to complete the paper work, that is, have the client sign the order, complete the credit proposal and provide the copy brief. You then need to service the sale.

Step 7: Service the sale

This step is not just about this sale, it is about how you can build this first sale into an ongoing partnership so your station becomes a regular part of the client's advertising programs and this client moves from your prospecting zone to your client servicing and growing zone.

This step is about *delivering the promises* you have made, for example, taking the commercial to the client to hear rather than sending it attached to an email. It also involves providing the client with the times, day and date their commercials will be broadcast, known as pre-broadcast times, well before the schedule commences and providing, after the campaign has concluded, the post broadcast details which verify the campaign was executed as planned.

Clients want to develop trust in their sales representatives and they do this through demonstrated qualities. This is simply illustrated by the statement 'keep your promises'. Never offer something you can't deliver; you will lose this client and many others, as the client will be a negative influence. Deliver your promises and the client can become an advocate for you and your station, which means more sales and more revenue from existing and referred clients.

Media agency sales

Today the media agency is a communications specialist offering a sophisticated range of diverse services including digital, content, econometric modelling and sponsorship services, as well as the core competency of media planning and buying.

The media agency's function is to ensure the advertiser's message is being seen, read or heard by the appropriate people in the most relevant environment with an appropriate level of exposure at a competitive cost. Once the strategist has decided radio is on the plan it is the radio buyer's role to select the preferred list of stations and the number of spots to be bought as explained in guidelines released by the Media Federation of Australia.

Networks and individual stations have a team of sales people dedicated to the media agency. The agency team is normally smaller than the direct team as there are fewer media agencies to service and the same team members can service multiple media agencies. The agency sales team can be working at either a local or network level simultaneously. Local means the market they are in, for example, Sydney; network means all markets the radio brand covers, for example, all capital cities, or the requirement maybe for specific markets such as Melbourne and Brisbane.

Media agencies will provide a brief detailing their requirements from your radio station or network and nominate the time they require a recommendation from you.

The media agency requires you to interrogate their brief to ensure you can deliver the best application of your station or network's products to reach the desired target audience effectively. This may require the brief to be passed to the integration team, who will prepare a multifaceted solution which will be presented to the radio buyer at the agency. The recommendation is then evaluated and a presentation made to the client. Once client agreement is received the media agency advises the radio station or network that the plan is to be executed.

Media agencies cannot make the buying decision. They recommend your solution to their client and the client accepts or rejects that recommendation. This means that as the radio station or network sales person you are not in a position 'to close the sale'. However, you are in a position to develop a 'partnership relationship' with the media agency so your station or network becomes a primary supplier of radio advertising time and other promotional opportunities to the media agency and their clients.

The written proposal or leave behind is still an important part of the process as it details your offer and associated costs. On acceptance of your plan the media agency will provide its own paperwork to manage the booking and payments.

Prospecting in the media agency

A media agency has quite a diverse number of clients, many of whom are not radio advertisers. Radio sales staff are normally involved with 'radio user' clients rather than with those who are declared non-users of radio. This in itself is a challenge given radio can be effectively used by a diverse group of products and services. Commercial Radio Australia (CRA) has executed a number of studies and activities to draw the effectiveness of radio to the advertiser's attention. A radio effectiveness study, conducted by CRA in 2005, showed by allocating 20 per cent of a company's television budget to radio run in conjunction with the TV campaign the effectiveness of the whole campaign could be increased by at least 6 per cent. A study of radio and online usage by CRA in 2007 showed that over 80 per cent of people who hear a radio commercial have visited that website as a result. Over two thirds of commercial radio listeners are online daily and these listeners are using the internet to shop, research or download information.

As a sales person on the media agency team, the objective of prospecting is to get non-radio clients onto the radio generally and your network or station specifically. This means taking the radio message supported by studies, such as those mentioned above, beyond the radio buyer and presenting the 'reasons why' to the strategists and planners (within the media agencies) so radio can be part of the considered solutions. This may also mean developing a relationship with the advertiser in a similar manner to the direct sales team, although the outcomes may be re-routed through the media agency.

Radio sales—whether commercial or community broadcasting, direct or local market, regional or metropolitan—require good product knowledge and the application of that knowledge to develop a radio solution to satisfy an advertiser's communication needs. It also requires the establishment of a partnership relationship with the direct client or the media agency to grow the business.

USEFUL WEBSITES

<www.2sm.com.au/network.html>
<www.abc.net.au/corp>
<www.aceradio.com.au/>
<www.aria-radio.com/aria_connect>
<www.arn.com.au/>
<www.austereo.com.au/>
<www.cbaa.org.au/>
<www.commercialradio.com.au>
<www.digitalradioplus.com.au>
<www.dmgradio.com.au/>
<www.grantbroadcasters.com.au/>
<www.mediafederation.org.au/careers/resources (Educational Guide)>
<www.scmedia.com.au/>
<theradio.com.au>

16. PROGRAMMING

Graham Smith
and Steve Ahern

Programming a radio station requires a mixture of skills, including staff management, audience research, music direction, marketing and gut feeling. Here, music and talk programming in the different radio sectors are examined.

COMMERCIAL RADIO PROGRAMMING

Since formatting was introduced to radio stations in the late 1950s to combat the new challenge of TV, the role of the program director (PD) has consistently gained in importance as consumers were given more listening options through the introduction of additional radio stations and new technologies.

Radio in the 1960s was affected by both musical and social change as the ‘baby boomer’ generation significantly influenced the development of radio formats to targeting their demographic during the following decades.

Through the 1970s and 1980s the Top 40 format diversified into a number of target-specific formats, including contemporary hit radio (CHR), oldies (hits and memories), adult contemporary (AC), album-oriented rock (AOR), easy listening, news/talk and sports/talk.

Increased competition during the 1990s caused further fragmentation with contemporary rock, classic rock, soft adult contemporary, good-time oldies and oldies-based adult contemporary formats catering for individual market 'niches'. In the 2000s radio music formats in Australia were influenced by hip hop, dance and alternative music styles, with some digital radio stations choosing to focus on these stylistic niches rather than targeting larger audience segments with a wider mix of music genres. See Chapter 1 for more on the history of stations and formats.

This more complicated and highly competitive programming environment has demanded more highly skilled PDs to target specific groups of listeners. With more diversified formats than ever before, and more choice of music styles on the internet through podcasts and music recommendation sites such as Pandora and last.fm, the challenge for the radio station PD is to continue to secure enough target listeners who are attractive to potential advertisers to ensure that the radio station remains profitable.

Developing a format

The key to programming is the development of a format that delivers a specific target audience by selection of programming material, inclusion of relevant promotional and marketing strategies, and an acceptable level of advertising content.

Research plays an integral part in establishing that segment of the listeners that the station targets, its viability commercially and the programming ingredients which fit the 'lifestyle' or 'pyschographic' of the proposed audience.

Innovative programming ideas attract listeners to the format and PDs need to consistently eliminate negative ingredients to minimise listener 'tuneouts' that may drive them to another station.

The intensity of competition from other commercial formats, as well as public and community broadcasters, requires that no aspect of programming is left to chance. To compete successfully, the on-air product must take into account local tastes, the currently available formats within the market, the mood and the needs of the local community and the desired target audience. See Chapter 14 for more on research.

When conducting research to identify the format niche which the station desires to fill, information such as the audience potential for the target demographic, their music tastes, the lifestyle components that appeal to the proposed target, the interest in news, current affairs and comment, style of on-air personality and the level of radio listening are some of the many questions needing to be answered.

Programmers can then prepare format clocks that are designed to maximise the time spent listening to the station by its target audience. Most listening to a radio station is provided by its primary and most loyal listeners, with the remainder coming from secondary listeners who might spend most of their time listening to a competitor. The programmer must use both skill and experience to increase the 'time spent listening' to that station, converting secondary listeners to more valuable primary ones.

The development of marketing strategies to position the radio station in the market is integral to the station's success. Advertising and promotional expenditure is often limited, but the programmer's access to listeners should be used to create 'word of mouth' for the product. The most valuable form of advertising for a radio station is from peer-group conversation around the water cooler or coffee machine about something that was heard on a listener's favourite radio station.

Music programming

Programming is a combination of scientific research, the sound and feel of the station, music requests and online interaction, chart information and the combined experience of the PD and music director, all feeding in to the structure of the playlist to ensure correct placement and rotation of the selected music.

The days of relying on record sales in formulating the Top 40 formats of the 1950s and 1960s have long gone, and have been replaced by a total 'listener-focused' philosophy. Using the internet, iPods and mobile phones, listeners now have as much control of their personal music playlists as radio stations once had, so radio must offer a combination of music, personality and content that listeners could not get elsewhere if radio is to prosper in this increasingly competitive multimedia world.

The radio station PD will normally have programming control of all on-air product, including news and music, but will usually allocate the daily functions of music management to the music director.

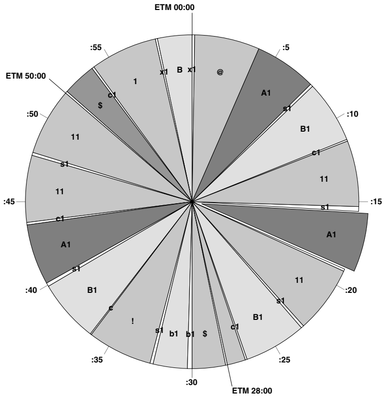
To provide consistent music programming, the station's format will include a defined music policy which documents the structure of the station's music playlist, music universe and hourly music clocks. These provide a structure for the delivery of the required on-air sound.

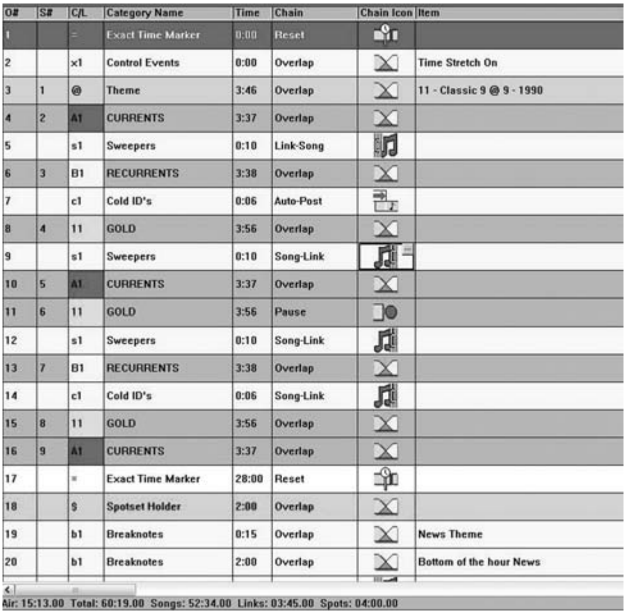
The music universe is the entire 'active' list of music tracks that are played as part of the format, but excludes the 'inactive' tracks that may remain in the total library but are not played. The music universe includes all oldies categories, as well as the current playlist consisting of current hits, new music and recurrents, all separated into individual categories. Music clocks provide a template for the content of each hour's programming.

The oldies list may include power oldies, individual era categories and album-track oldies. Each of these segments may be further separated into level one and level two subcategories to maximise the programmer's control of the on-air music consistency.

To assist in maintaining consistency, each music category needs to be distinct. This enables the music programmer to include all of the elements required in each hour while creating a sense of variety without negatively affecting the overall sound.

Radio stations use music rotation software to provide the required rotations and to limit the amount of repetition of the music universe, assisting the music programmer to achieve a comfortable music pattern while restricting monotony.





O#	S#	C/L	Category Name	Time	Chain	Chain Icon	Item
1		=	Exact Time Marker	0:00	Reset	⏱	
2		x1	Control Events	0:00	Overlap	⧖	Time Stretch On
3	1	@	Theme	3:46	Overlap	⧖	11 - Classic 9 @ 9 - 1990
4	2	A1	CURRENTS	3:37	Overlap	⧖	
5		s1	Sweepers	0:10	Link-Song	♫	
6	3	B1	RECURRENTS	3:38	Overlap	⧖	
7		c1	Cold ID's	0:06	Auto-Post	⇥	
8	4	11	GOLD	3:56	Overlap	⧖	
9		s1	Sweepers	0:10	Song-Link	♫	
10	5	A1	CURRENTS	3:37	Overlap	⧖	
11	6	11	GOLD	3:56	Pause	●	
12		s1	Sweepers	0:10	Song-Link	♫	
13	7	B1	RECURRENTS	3:38	Overlap	⧖	
14		c1	Cold ID's	0:06	Song-Link	♫	
15	8	11	GOLD	3:56	Overlap	⧖	
16	9	A1	CURRENTS	3:37	Overlap	⧖	
17		=	Exact Time Marker	28:00	Reset	⏱	
18		$	Spotset Holder	2:00	Overlap	⧖	
19		b1	Breaknotes	0:15	Overlap	⧖	News Theme
20		b1	Breaknotes	2:00	Overlap	⧖	Bottom of the hour News

Air: 15:13.00 Total: 60:19.00 Songs: 52:34.00 Links: 03:45.00 Spots: 04:00.00

Within each music category it is important to have a variety of music styles, including a multitude of tempos, textures and intensities to prevent similar-sounding tracks from being played sequentially.

Oldies categories are normally broken down into eras that may span periods of approximately five years, or as tight as the degree of control requires. The tighter the categorisation, the tighter the control.

The particular eras of oldies selected in the music universe depends upon the demographic target of the station. Research has identified that the music that was important to listeners during their 'formative years', normally 14 to 18 years, remains their favourite oldies music in later years. From this research, PDs and music directors can easily calculate which eras, or decades, of music the format should include to attract listening by the target audience, and can decide which current hits have a similar sound and should be included.

Music programmers use the latest survey information within their computerised music selection program to match music rotations with listener reach and frequency. This ensures that the music playlist gives the greatest impact with the station's listeners.

It is important that the music format is continually monitored, constantly reassessed and finetuned to ensure that the programming philosophy is being maintained and that the music format is achieving the desired results. Every decision is aimed at creating longer listening spans and at reinforcing a good strong imagery for the target audience.

Music selection and rotation

There are no set rules on rotations and how tracks are placed each hour but there are some common practices that many music directors follow, so get to know how the music director implements your guidelines on selecting and rotating music. Starting the music mix at the top of each hour gives the programmer control. This is achieved by developing a number of hourly music clocks.

The perceived predictability of a sequence restarting each hour can be offset by varying music clocks or by a series of a set number of events, spontaneously resetting upon completion at whatever time during the hour.

The following ten questions assist music programmers to re-evaluate their music playlist decisions regularly:

1. Are you convinced that every playlist track fits its category correctly?
2. Is the track a 'hit' with specific audience-reach value?
3. Do the music rotations achieve what was originally planned?

4. Do all the important categories fall into the required quarter-hour to provide the necessary balance?
5. Does the system restrict tracks from recurring in the same hours and 'dayparts' when played?
6. Are all oldies categories matched to the eras that will attract the target demographic?
7. Do the stand-out 'power' tracks encourage longer listening?
8. Are tracks programmed correctly by strength, texture, era and tempo to emphasise variety?
9. In tightly designed formats, is the station rolling back into music immediately following program breaks?
10. Do the oldies stand the test of time and remain relevant to the audience?

Talk programming

There are various types of talk radio formats. Some of the current successful commercial radio talk formats in Australia include personality talk, news talk and sport talk. The ABC and community radio sectors have also developed various talk formats (see 'Non-commercial programming' later in this chapter and Chapter 17 on radio features).

Before a station adopts a talk format it embarks on extensive research to determine its target audience and the likely viability of talk in the market. Many AM stations have developed talk formats, because talk radio does not necessarily need the high quality of the FM band to attract an audience. These stations will migrate to digital radio in the next few years and are likely to use the opportunity of having more transmission bandwidth to develop a music stream to complement their talk stream on their second channel, or to replay talk material at different times.

Commercial talk formats generally appeal to listeners over 40, whereas younger listeners most often listen to music formats. When listeners tune in to talk formats they are generally seeking stimulation and information to make sense of the world around them. They more often tune in to music stations when they are seeking relaxation and escape.

Formatting a talk station is similar to formatting a music station. The PD must consider all the elements of the hour's clock and select the right mix of editorial comment, interviews, talkback, news, ads and music to suit the needs of the talk audience at that time (see Chapter 13, Talkback).

Program structure

On-air announcers must have the knowledge to be able to structure each programming hour, so that the combined ingredients make the program interesting, informative and, above all, entertaining. This knowledge comes from regular briefings by the program director.

In this ‘global village’ of ever-increasing competitiveness for a consumer’s attention, and each listener’s endless demand for instant gratification, programming must consistently provide satisfaction if a radio station is to maintain listenership.

The term ‘program’ can literally mean an infinite number of combinations and variations. For the purpose of demonstrating the creation of a program a number of elements are discussed, including music, talk, interviews, news, ads, announcements, ad libs, intros and outros, timing, continuity, style and even mistakes.

Many radio stations schedule news on the hour. Normally, this is either produced and presented internally by a local journalist or provided by a network. Depending on format requirements, at the end of the news the on-air presenter is required to either roll directly into the first music track of the hour or to present a brief promotion of the highlights to be featured in the next hour before introducing the first element of programming.

Continuity is the art of linking elements together, so the program flows from one ingredient to the next rather than being just a collection of ‘pieces’ interposed with music. The radio listener reacts favourably to a predictable flow of items, but may become bored if it lacks variety. Vary the length and the timing of each segment.

Interviews are a basic technique for imparting information. Every effort must be made to ‘get to the point’ quickly and to ensure that the interviews are as short as possible. The same criteria apply to telephone contestants, talkback callers and reporters. The ultimate tests for every ingredient are: ‘Is it entertaining?’ or ‘Is it necessary?’

When playing music, do not use the same format when introducing and back-announcing, for example, ‘This is . . .’ and ‘That was . . .’. These words need not be said at all.

Subject to specified format requirements, music tracks may sometimes be rolled together without any interruption. At other times delete any back-announcement, roll the instrumental introduction of the next song and insert the station call sign and a brief intro over the second track. Another option is to briefly back-announce the previous track over the fade-out, give the call sign and roll immediately into the next track without any further talk. While talking over music intros assists momentum of programming and develops a consistent flow into the next item, keep it to a minimum as it alienates listeners who ‘hate announcers talking over the intros of their favourite songs’.

In some programs, music can be used as a theme for the introduction and close of a program. Most stations use a musical theme to introduce news bulletins.

Music can also be used, primarily in talk formats, to separate talk segments in the form of two- to three-second 'stings'.

Music jingles are often written and produced to provide a theme for the radio station, or for specific advertisers to use in commercials. Production music, especially produced for the purpose, is often used in advertising material also.

Presentation also includes 'live-read' announcements, consisting of commercials, promotional material, information pieces, community announcements and so on. Always remember that all announcements must have the widest appeal to the target demographic, and must always be relevant and entertaining.

Some radio presenters appear to be experts in ad libbing. The best ad lib is one that sounds 'from the heart' and is the most appropriate for the situation. Great ad libbers tend to be born, not made, although 'practice does make perfect'. The greater the preparation and confidence, the better the presentation. Many of the world's greatest speakers are well practised in their delivery and have a file full of ad libs ready for the appropriate occasion.

When a mistake is made, do not highlight it. Remember, listeners are usually involved in other pursuits while listening to the radio. Only a few people might hear a mistake, but many more will be aware of it if highlighted. In the case of a major error, such as within news that changes the importance of the information, an apology or correction is valid. Making mistakes is a part of life, but confidence through practice is a good way to minimise errors.

The style of on-air presentation is dictated by the image and sound of the radio station, the format, the target audience, the personality of the announcer, the type of music and, to some extent, by the time of day.

At breakfast the hectic nature of the household is often reflected by the hectic morning programs as listeners are updated with the information relevant to their day. Later in the morning talkback and interview-style programs become more acceptable, with listeners able to absorb larger bursts of information. In the workplace music can help to alleviate the daily drudgery, while attitudes again change through the afternoon drive period where listeners are winding down as they head home and into entertainment-based evening programs.

Comedy has demonstrated that it can lift an audience and a program. However, comedy is difficult to deliver; the material must be funny and the subject needs to be relevant to listeners. Announcers who are not 'born' comedians should stay away from comedy. Programs can be 'fun to listen to' without being 'funny'. Announcers should always be themselves. People who try to be someone other than themselves by trying to adopt another person's style on air ultimately fail.

Radio is one-to-one communication. Announcers should talk *to* the listener, not *at* them. Treat listeners as individuals, not as a group of people. Never assume that the listeners know what is being spoken about. Always present information and ideas as facts being communicated for the first time. Announcers should analyse their material by airchecking their programs regularly and by listening critically to the tape.

Pre-promotion of 'upcoming' events is referred to as 'teasing' the audience. Announcers are normally required to 'tease' across commercial breaks during the hour and across hourly news bulletins to encourage listeners to stay tuned for later program elements or features.

Timing up to the end of each hour is achieved by calculating the number of minutes and seconds of scheduled content left at approximately ten or 15 minutes before each hour, and selecting the duration of music required to time out. This is particularly important for those stations that have network news commitments.

The most important rule for all on-air announcers is that a disciplined approach to program preparation results in a professional on-air program. Ensure that every hour on air is supported by enough show prep to make that hour as good as it can be.

Audience research

Audience research is divided primarily into two types: quantitative and qualitative. Quantitative research is simply the measurement of *how many* people are listening, that is, the 'quantity' of the audience in its various subcategories such as sex, demographic, psychographic, dayparts, place of listening, and so on. Qualitative research defines *why* people are listening, the 'qualities' associated with their listenership. See Chapter 14 for more on research.

Smaller regional and rural markets do not generally have the financial capacity to obtain such detailed and expensive information, with many programmers improvising and developing innovative ways of learning about their listeners' ever-changing tastes. Effective group research projects must be disciplined, well planned and executed, and should include the following steps:

1. The fundamental question should be addressed before undertaking the first focus group: Why are we doing this research?
2. What are the strong and weak points of the station's format in comparison with our competitors?
3. What is the perception of the station in the minds of our listeners? Do adults think the radio station is for teenagers, or do teenage listeners perceive the station to be for adults?

4. Why do our listeners share their listening with our competitors?
5. What are the perceived differences of male and female listeners?
6. What makes up the core audience's lifestyle?
7. What are the respondents' other media preferences?
8. What are the major concerns affecting our listeners about society in general, our country, our local community?
9. What interest do listeners have in news, sport and current affairs?
10. What are the listeners' favourite personalities, programs, promotions, contests, prizes and the like?

Auditorium music tests (AMTs) and online music research are other valuable research tools for PDs to provide listener evaluation of a station's music universe. Most regularly applied to the oldies library, well known and easily identified currents and recurrents may also be measured using this methodology.

An auditorium test consists of around 300 invited listeners seated in an auditorium. They cover the target demographics of the radio station. Under the direction of a moderator, up to 500 music tracks, limited to no longer than ten seconds with a few seconds gap between, are played to the audience. The respondents are usually required to rate the tracks on a scale from one to six, where one may be their favourite and six may be their least favourite.

Once the data is compiled from such a music test, PDs can reflect the listeners' tastes in their programming decisions. For example, those tracks that have been 'burnt' by overexposure may be rested, or moved to slower rotating categories. See Chapter 14 for more on research techniques.

The PD's role

The duties and responsibilities of a PD vary significantly from station to station, from commercial to non-commercial stations, and from networks and duopolies to 'stand-alone' independent operations. However, the fundamental role of the PD is to develop and to direct the station's on-air sound as the company's product manager.

The following is a general duty outline which covers most of the ongoing responsibilities of a PD in commercial and some non-commercial formats.

- Recruit, develop and direct the station's on-air staff.
- Conduct regular airchecks to improve on-air staff performance, to inspire their creative development and provide support when required.
- Prepare announcer rosters and schedule activities, promotions and production commitments.

- Administer the employment and termination of programming staff, including on-air talent, music library, promotions, production and news staff.
- Establish a talent bank to provide a backup list of talent for any team movement, and to ensure that the best people are hired for each available shift.
- Ensure that credit is given to staff wherever relevant to keep high morale in the programming team.
- Develop programming and marketing strategies that reinforce the station's image and position within the community and the commercial marketplace.
- Consolidate station positioning both on air and in all outside environments by maintaining consistency of a singular positioning statement.
- Adhere strictly to all legal requirements, including the Broadcasting Services Act 1992 administered by the ACMA.
- Develop a full knowledge of the various laws, guidelines, regulations and codes of ethics applying to all aspects of broadcasting including, in the case of commercial operations, the rules applying to radio advertising.
- Understand the operations of all areas within the radio station, for example, schedules, promotions, production, music library, sales, and so on.
- Check all commercial, music and programming logs before broadcast to ensure that all necessary changes are made.
- Ensure the music director accurately follows the station's music policy to target the required audience.
- Coordinate all quantitative and qualitative programming, music and audience research.
- Moderate regular music meetings, reviewing all new music and constantly reassessing the core music universe.
- Attend weekly promotions meetings.
- Attend sales meetings regularly to communicate programming and promotional strategies to sales personnel.
- Develop reach and frequency patterns for music formats similar to advertising campaigns.
- Constantly listen to your station(s) and monitor your competitors regularly.
- Communicate constantly with the promotions director to coordinate promotional campaigns for on-air presentation.
- Act as the liaison between sales and programming at all times, and regularly be involved with the station's clients.

- Oversee all production of promotional material, station identification and commercial content.
- Impose policies on news presentation, delivery, personnel and content guidelines that are consistent with the demographic target and lifestyle of listeners.
- Understand the technical operation of the station so as to be able to recognise any program failures or problems.
- Evaluate survey results and implement adjustments to the advantage of the station. Prepare a report and conduct a meeting to explain positives and negatives and strengths and weaknesses to staff.

Leadership and management

An effective PD uses leadership skills to inspire the programming team to excel and to achieve the company's goals. As the team leader, the PD must lead by example and provide the vision for the group. In the marketing 'battle' for listeners, the leader sets the strategies from the front.

Management is about measurement. Defining results and measuring achievement against goals are important elements of management. Much of the routine management process has been superseded by computers, hence the reduction in middle management in many organisations.

To be able to exercise the degree of control necessary to ensure consistent on-air professionalism, the PD needs to be an excellent communicator so that staff have a clear understanding of the programming goals and policies. The lack of concise communication of philosophies and expectations can result in a breakdown of control in the programming department.

The commonest form of communication is one-to-one verbal communication, but matters of policy need to be reinforced with a programming policy document and updated regularly with formal memos.

Talent development

On-air talent is employed from a wide variety of sources. While many have developed their talents via an announcing career, many have originated from other backgrounds as diverse as politics, comedy, newspaper journalism and speechwriting.

The best and most successful on-air performers usually succeed through dedication, practice and years of hard work—often not only their own, but that of their PD too.

Regular meetings with and critiquing of on-air talent accelerates the process of self-improvement. The old adage that 'everyone is their own worst critic' can be used to great advantage by PDs in motivating on-air performers.

The following are some guidelines for on-air talent that apply to commercial and non-commercial operations:

- Be yourself. Don't try to sound like anyone else.
- Don't talk down to the listener. Treat the listener with respect.
- Get to know your listener. Understand the demographic and psychographic profile of who you are talking to.
- Always be well prepared for your on-air program. Having too much material is better than not having enough. Many top performers will advise that each hour on air deserves at least one hour of 'prep'. It helps announcers to sound organised.
- Know the subject of your format extremely well—whether it is music, current affairs, general talk, sport, and so on.
- Avoid dead air. Gaps destroy flow.
- Ensure the flow of your program with natural energy and pace—not falsely manufactured energy.
- Avoid too much talk over record intros and outros. This is consistently stated by radio listeners as their 'pet hate' with announcers.
- Believe in your product—your format and your station—and 'sell' all aspects of music, programming ingredients, promotions and positioning statements.
- If you are not a natural comedian, do not try to be one.
- Be concise with all breaks. Word economy is a virtue.
- Learn to take ten seconds to deliver what may normally take 60 seconds.
- Add magic to the format controls by being creative. Any departure from the format (such as an interview) should be approved by the PD before broadcast.
- Speak the 'language' that relates to the listener. Talk in terms that the listener understands.
- Always reinforce the station call sign, frequency and positioning statements accurately and uniformly.
- Do not just 'read' live liners—sell the concept. 'Sell the sizzle.'
- Pre-promote the major features on the radio station, and not only those being broadcast within the hour. Make reappointments with the listener for features at other times of the day.
- Regularly aircheck your program in addition to the formal critiquing sessions with the PD.

Commercial content

We live in a highly commercialised world where consumers are bombarded with thousands of advertising messages each day. Radio listeners react best to what they consider to be real.

Radio ads are usually presented in blocks of designated duration. Often, the placement is at set times each hour, dependent on the format, in blocks of either a specific number—four, five or six—or specific duration—120 seconds, 150 seconds or 180 seconds. Research has identified that most commercial radio listeners claim that they would prefer to hear fewer ads on their favourite radio station.

PDs enforce their station's policies of commercial content and placement to minimise listener alienation, while still having regard for the commercial nature of the business and respect for achieving satisfactory results for advertising clients from their commercial messages. PDs should also be aware of any third-party contracts an announcer may have and ensure that they do not influence program content and/or are properly declared to the listeners.

On commercial radio stations PDs and management need to be aware that the commercial content contributes a significant proportion of the hourly programming. Stations need to spend equal time, effort and financial investment ensuring that the format includes the best music, the best promotions, the best personalities, the best news and the best ads. The same critical review relating to sound, attitude, texture, intensity and lifestyle should be applied to all elements of the program hour.

Commercial radio stations have two distinctly different consumers of their product—the listening customer, and the advertising customer. Both are equally important to the success of the station as a commercial business.

To alleviate the much-referred-to conflict between sales and programming PDs need to understand the objectives of the sales department, and a defined set of program guidelines needs to be established and continually explained to members of the sales team. The most successful and smoothest running operations are those where the PD and sales manager regularly communicate together and with their staff.

Marketing

Marketing is all about creating a market for the station both on air and off air in outside activities. The focus is on the consumer, rather than merely advertising the attributes of the product.

Marketing has been accurately described as the 'battle for the mind' of the consumer, and radio marketers instil their product in the mind of the listener through 'positioning'.The following are some general positioning questions that should be considered:

- What position does your station 'own' in the marketplace?
- What format niches are unoccupied in the local market that your station could potentially satisfy?
- What segment of the audience is not being served satisfactorily?
- Who are your major competitors?
- What are their strengths and weaknesses, and your opportunities and threats?
- Have you conducted a SWOT analysis of your market, examining strengths, weaknesses, opportunities and threats?

If listeners have a particular perception of your radio station that you believe to be inconsistent with your evaluation, remember that *perception is reality* and you need to deal with reality.

Promotions

Promotions are an essential part of the marketing mix on a radio station. They provide interest, excitement and entertainment, both on air and in outside activities.

Normally, outdoor promotions are targeted to reach people who do not listen or are not regular listeners to your station in order to build the cumulative, or total, listening to your radio station. On the other hand, on-air contests and promotions are designed to increase listening spans and to generate increased average listenership and share of listeners.

When devising promotions, always ensure that the on-air audience is fully involved and entertained. Research shows that only about 5 per cent of a station's listeners 'actively' participate in contests or promotions. Therefore, the remaining 95 per cent of 'passive' listeners need to be informed or entertained by the contest or promotion. Always ensure that the promotion adds fun to the radio station and doesn't just add clutter. Every opportunity should be taken to pre-promote the upcoming event. More than half the excitement is generated during the lead up to the promotion itself. Make sure that the station also follows through after the event, to promote the winner of the contest and claim ownership of the excitement associated with the winner announcement.

Promotion of activities, events, contests and on-air specials should involve regular creative updates of recorded 'promos' and live 'liners', making sure that they are at all times entertaining and are scheduled frequently for maximum benefit.

On-air announcers need to be visible in the local market. Announcers who become local identities and household names have much increased value to themselves, their clients and their station's listenership. Whenever such personalities appear in public they should wear jackets or shirts that readily identify them with the station.

Visibility in the community can also be increased by cross-promotions that involve newspapers, magazines and TV stations. Billboard ads or promotional events using outdoor signs and listener merchandising as well as sticker campaigns give the station's call sign additional exposure.

Logo identification on merchandise, outdoor signage, in newspaper ads, on promotional vehicles, stickers, stationery and the like should always be uniform and carry the same message.

Staff communication

It has been said that although radio is a communications business, it often does not do too well in the business of communication. This refers to the necessity for all successful companies to communicate effectively internally.

Radio is a 'people' business. Its success is dependent upon the talents of its people: announcers, office staff, technicians, producers, journalists, accountants, telephonists, receptionists, programmers, sales personnel, promotions staff and managers. All combine to produce successful and profitable programming for the radio station's listening and advertising clients.

Communication is a two-way flow, from management to staff to ensure that everyone understands corporate philosophies, policies and marketing strategies, and from staff to management, generating ideas and valuable contributions to the success of the company.

The PDs need to compliment and encourage staff constantly when tasks are performed well. Often far too much emphasis is applied in many organisations to negativity and criticism when something has not been done well, rather than to rewarding and celebrating when something is. Creating a positive work environment ultimately pays off in improved morale and consistent output.

When problems occur, the discussions should be held one on one in an office rather than in the corridor. If an announcer makes an on-air mistake or is not following the format, the correct procedure should be to discuss the issue during an aircheck session rather than in the studio while the announcer is on air. Harassing an announcer during an on-air shift is unprofessional and only makes matters worse than they already are. However, if an announcer is experiencing some difficulty which requires the programmer to communicate with the announcer during an on-air shift, it should be done in a pleasant and consultative way, not in a confrontational manner. On all occasions, reinforce positives rather than overreact to negatives.

Presentation problems should also be considered in one-on-one aircheck meetings. In most instances the announcer will identify the problems personally without the need for the PD to point them out, allowing for positive reinforcement.

When consulting staff, management should devise a strategy to achieve the desired outcome. People management is one of the most important attributes of a good PD. The initials 'PD' should stand for 'people director' as well as 'program director'. There are several other important attributes including open-mindedness, conviction, courage, consistency, awareness, total commitment, a sense of humour and a sense of community.

The measurement of success

To be a successful PD, a programmer needs to have a complete 'feel' for the radio industry and an empathy with listeners. Be prepared to live, talk, listen, sleep and eat radio 24 hours a day.

One of the most traumatic days in a PD's life is the day that the survey result is released. The entire staff's future depends upon the result, which needs to be analysed and dissected in a professional manner with intense pressure for immediate reaction and strategies to be put in place for the future.

When a survey result is not what's expected, the PD must become the calming influence to diffuse the possibility of panic. The clear vision must remain, tempered by the verdict of listeners. A result lower than expected will unleash a legion of critics in the marketplace—and within the station. A higher than expected result will initially generate uncontrollable euphoria, followed by the inevitable finetuning of the format as another 'day in the life of a radio station' moves on.

No matter how great the format, no radio station will continue to increase in ratings forever and no station will be number one for all time. It is those times when great survey results hit your desk that make you realise what a great business you are in. There is no other job in radio, or in any other business for that matter, which could possibly give you the great 'buzz' that being a PD does.

NON-COMMERCIAL PROGRAMMING

Community radio's role is diverse. Community stations must serve demographic, cultural, social or geographic communities and allow access to the airwaves for all members of those communities. Because of the diverse nature of the community radio sector, the formats of each station are also diverse.

Some community stations have formats that sound like commercial stations; others sound like ABC or SBS radio; others mix formats to create a unique sound of their own. Community radio programmers should identify the general target sound of their station and use the information that sits best with their format.

ABC, SBS and community radio do not generally devote the same amount of money to research as the commercial sector, but that doesn't mean they don't conduct research. It is essential that all radio stations be listener focused, and research helps in that process. Community stations on a small budget do their research one to one when listeners visit the station or attend station events. ABC and SBS stations amalgamate commercially available research with other forms of program evaluation relating to the 'public service' nature of their charters. Recent national research conducted for the community radio sector by research company McNair Ingenuity showed that listeners highly value localism and alternative programming content from community radio stations.

The ABC has a number of national and local radio stations: Triple J, ABC Classic FM, Radio National, News Radio and Local Radio, plus the ABC's overseas service, Radio Australia, and digital radio channels Dig, Dig Country and Dig Jazz. The formats of each of these stations is different from commercial radio and carries the nationally recognised ABC News Service.

Triple J plays music targeted at under-30 year olds and uses flow formatting with young announcers. It combines different ratios of music and talk at different times of the day and seeks to push boundaries in both music and presentation style.

ABC Classic FM plays mostly classical music with an over-40 age target. Radio plays and features, as well as jazz and other non-pop music styles, are included in the format. The presentation style is softer and more sedate than the other ABC Radio networks. Talk is kept to a minimum during the week, although some programs contain interviews and talk features.

Radio National is formatted mainly in a block program style where one specialist program follows another, except at breakfast—where a flowing information, news and personality program ranges across light and heavy current issues. In other timeslots on Radio National, programs created by specialist departments explore a range of issues relevant to Australians. These programs generally concentrate on a single subject in a documentary or feature style, allowing much more depth than a program covering many topics can manage. See Chapter 17 for a discussion of the elements of documentary and feature programming.

ABC News Radio is a rolling news format in prime times where news headlines and features roll through an hour clock so that they are heard about once every 20 minutes. In large markets such as the United States rolling news formats are commercially viable, but in Australia it is doubtful whether a rolling news format would generate enough revenue to be taken up by commercial radio. When run by the ABC the format can draw upon the national resources of the ABC news department in a way that makes it cost effective. The News Radio network is heard mostly in Australia's capital cities and also broadcasts federal parliament, sport and feature programs in non-prime times.

The ABC's local radio group comprises stations in regional centres and capital cities. It is the closest to commercial talk radio in format, using a combination of personality announcers, interviews and talkback. The difference is in the market these stations seek to reach and the way in which they combine elements from other areas within the ABC. For instance, the local radio group carries a major 15-minute news bulletin at 7.45 every morning, followed by the half-hour current affairs program *AM.* When viewed from a commercial programming perspective these programs would not sit well in a breakfast timeslot yet, in the ABC context, they are beacons within the programming landscape that draw listeners to the local radio network. The local radio network combines successful elements of both ABC specialist-style programming with commercial talk-style programming to create a format that differs from commercial radio in both structure and content.

Radio Australia is Australia's overseas voice. Operated by the ABC, it rebroadcasts news, interviews and programs from other ABC networks and mixes them with current affairs and news in different languages. It is also available via streamed audio on the internet. The main target audiences for Radio Australia are in Asia and the South Pacific, with delivery now on many broadcast and online platforms.

ABC Radio's digital radio stations include 'Dig', which showcases a mixture of sophisticated alternative, jazz and country music tracks with a high percentage of Australian artists. ABC Country and ABC Jazz focus totally on these niche music styles, and ABC Grandstand is a sports channel.

SBS Radio has two multilingual channels on analog radio, plus digital stations which include PopAsia and Chill. SBS Radio's formats resemble Radio National's block-style programming with accessible flow formats at breakfast time and block programming at other times. The difference from Radio National is that SBS programs broadcast in languages other than English to reach that portion of Australia's population that does not speak English as a first language. SBS Radio's digital channels now provide more outlets for time shifted language channels, plus a world music channel called Chill and an Asian music channel call PopAsia.

PROGRAMMING CASE STUDY: NOVA'S PRODUCT LIFECYCLE

Here we look in detail from a programming point of view at the introduction and development of one station, Nova, which is now ten years old. Nova's first decade provides a good illustration of how a station changes over time and how programmers respond to challenges posed by each phase of the 'product lifecycle', which begins with the invention of a product then moves through market growth, then decline and reinvention.

The Nova network launched on the FM dial with spectacular success, first in Sydney then in other capitals, into markets that had not had any new competition for years and were getting stale. It is a good example of the effect of the product lifecycle on radio programming, going from successful challenger to challenged, to becoming established and then launching a digital radio 'brand extension'.

When new radio stations launch into an established market they usually adopt a format similar to their competitors and try to slide into the mainstream mix of listeners and advertisers, carving out their share by taking a little bit of the audience from each of their rivals. But when DMG Radio Australia launched its Nova network the approach of CEO Paul Thompson and Group Program Director Dean Buchanan was to find a new underserved commercial audience and sound different enough to lure them away from other media to the new stations.

Their approach changed thinking about the programming and launching of radio stations in Australia, and has encouraged programmers to think outside the square rather than just adopting a known, established format for new stations.

DMG aimed to invent something different in terms of formatting. The company researched listeners before the station launch and looked for new commercially viable opportunities. They found audience segments not served by or dissatisfied with their current radio program choices.

Leading up to the launch in each city the strategy was to get unusual test content onto the transmitter to generate expectation and media attention, then to trickle out announcements about presenters over several weeks before finally revealing the launch date itself at the last minute.

Below are some edited excerpts from a series of articles for Australian radio industry website radioinfo on the challenges and successes of starting the new DMG stations.

Nova's program director

When launching the new Nova stations in August 2000, Paul Thompson described the attributes of program director Dean Buchanan:

> What impressed me about Dean was that he didn't have limitations on how he was thinking about radio. He is very intelligent and he wasn't looking through a prism of someone else's radio or company format. He took a broad view—that's refreshing.

Nova's brand campaign

In April 2001, commenting on Nova's TV advertising campaign Larry Bruce said:

> Our development of the NOVA format keyed on offering a different sound from the traditional radio paradigm. The brand strategy focused on that promise. Saatchi translated that brand image into a unique and powerful TV campaign that is creative and groundbreaking while delivering the core message that NOVA sounds different.

Saatchi & Saatchi's CEO, David Ansell, told radioinfo:

> We developed NOVA 96.9's philosophy into a powerful positioning phrase: Sounds Different, which is not only true to NOVA, it sows the seeds for some very different advertising.
>
> The campaign takes the territory Sounds Different and literally brings it to life. In each of the television commercials an action is accompanied by a wildly inappropriate sound: a crying baby makes the sound of a chainsaw; a police car in pursuit plays the tune of a 'Mr Whippy' van [*Greensleeves*], and a barking dog makes the sound of a ringing telephone. In every case Sounds Different explains everything, and the idea cuts through with brilliant simplicity.

Nova promotions

Nova's irreverent brand values were enhanced by a series of promotions and competitions such as the 'Casa-Novas', the 'Wheelie Bin of Fortune', and 'Tossers':

> Who would risk having their old car crushed for a 50 per cent chance of winning a brand new car? Who would risk their wedding album being destroyed for their chance to win a second honeymoon in Paris? Who would risk all their clothes going to the Salvos for a shopping trip to New York with $5000 spending money? Only one of NOVA 96.9's Tossers!
>
> Monday to Saturday mornings, Merrick & Rosso will cross live to Tosser host, Leah McLeod, as she challenges NOVA 96.9 listeners to toss a coin and win amazing prizes, or risk losing something they treasure.
>
> Dean Buchanan, Group Program Director, said: 'We promised fresh and different ideas—NOVA 96.9 is all about sounding different and not doing the same old rehashed, stock-standard radio promotions that have been around for years. Tossers will be refreshingly bizarre—hang on to your hats!'

NOVA Sounds Different but your station doesn't

In April 2005 DMG won a court case to trademark the phrase 'Sounds Different', arguing that it was an essential part of their brand image. Radioinfo reported:

> No matter how different you may think your station sounds, you won't be able to suggest to your audience that it does because DMG Radio Australia has now successfully registered the phrase *Sounds Different*™ as a trade mark.
>
> At best, you could say your station is 'at variance' with others or perhaps that it is 'aurally significantly distinguishable' from others. But if you say that it *Sounds Different*™, you could spend the rest of your life in court.
>
> DMG Radio Australia, the owner of the Nova stations, first applied to register *Sounds Different*™ as a trade mark before the launch of Nova 969 and the phrase has been a distinctive identifier of the Nova stations around Australia ever since.
>
> The Trade Marks Office has now recognised that the Nova stations have been using *Sounds Different*™ in such a way, since then, that it has become capable of distinguishing the Nova stations from all other radio stations in Australia. The Office earlier this month therefore registered *Sounds Different*™ as a trade mark in the name of DMG.
>
> Paul Thompson, DMG chief executive, today told *radioinfo*: 'It is pleasing to see that our ownership of Sounds Different™ has been confirmed by the Trade Marks Office notwithstanding the earlier objections of Austereo. We have invested substantial time and money in the development of Sounds Different™ as a distinctive identifier of the Nova

> stations and we are delighted that its registration confirms that only the Nova stations can use Sounds Different™ in that way and it cannot be used, or misused, by any other station.'

Launching

After launching the Sydney and Melbourne stations, the Nova network was extended to Adelaide, Brisbane and finally Perth. This is how radioinfo reported the lead up to the Perth launch:

> Following the completion of extensive research in the Perth market, DMG Radio Australia, and its joint venture partner the Australian Radio Network, are finally going to give Perth a radio station that really sounds different—NOVA 937.
>
> The NOVA FM stations in Sydney and Melbourne have broken all the traditional radio rules with their unique music programming, and have scored good results, especially in the initial months after launch.
>
> NOVA in Perth will follow similar lines but 'will be built especially for Perth,' according to DMG CEO Paul Thompson:
>
> 'We don't have a formula to adhere to, and we have just completed a massive research project asking Perth radio listeners what they want, the results of which will be the foundation of NOVA 937 in Perth. NOVA is committed to being different, and we can guarantee that NOVA 937 will sound different, and will have less than half of the commercial content of traditional radio. The research shows that Perth wants a radio station that is fun, open, and positive, and doesn't preach, patronize, or belittle.'

From challenger to challenged

Nova enjoyed success in its first few years because it genuinely provided alternative offerings to other stations in the market, but its rivals did not sit still while Nova took parts of their audience.

Nova's nearest rival, in format terms, was Austereo's Today network of stations which included 2Day FM in Sydney, Fox in Melbourne, B105 Brisbane, SAFM Adelaide and 92.9 FM Perth. Those stations were hit hard by the introduction of Nova, with Austereo chairman Peter Harvie telling radioinfo in 2005:

> The radio landscape is undergoing a period of change. To hold ground is a credit to our teams on air, in programming, management and sales. Our key objective is to master the new environment and further build our Today and Triple M network brands. The previous [financial and

> ratings] results are no longer realistic and are unsustainable in the current market.

Austereo adjusted its music format in response to what was being played on Nova but that was not enough to save Today network stations from declining ratings in the face of Nova's new programming, so Austereo took drastic action to reinvent its on-air sound. 2Day FM, Sydney's highly successful but predictable breakfast team with Wendy Harmer and Peter Moon was scrapped and a range of new presenters were tried in the timeslot, including comedian Judith Lucy, but they could not shake Nova's dominance at breakfast with presenters Merrick and Rosso.

Selecting the right personalities and positioning were important for Austereo to regain at least some of its former market position. Finally the company put the established drive team Kyle and Jackie O on air and described their show as 'Breakfast with the Stars'. Entertainment interviews, celebrity gossip, Kyle's egotistical public profile and cutting sarcasm balanced with Jackie's 'niceness' created the right mix to challenge Nova's breakfast team. The network also developed new talent such as Hamish and Andy, who are now nationally networked at drive time.

Austereo's Today network had a difficult time for two years, but by 2007 many of its stations had regained market leadership after successfully challenging Nova. Meanwhile, Nova had moved from its honeymoon period to a period of stability. Ratings and profits were still strong, but the lead it had in many markets was slowly being squeezed as Austereo stations once again caught up and other stations also nibbled at the edges of Nova's audience. In 2007 Austereo CEO Michael Anderson said the company was pleased with its turnaround strategy:

> Targeting under 40s popular culture listeners on the Today network, and 25–54 rock, sport and comedy listeners on Triple M, has resulted in growth and consistent branding, with very little cannibalising of audiences. We have increased investment in . . . discovering and developing new talent, people skills, in programming and in sales training.

In 2007 the popular television soapie star Kate Ritchie was added to the Merrick and Rosso team to freshen their sound in the face of a declining audience, which extended the life of the show for another two years. In 2010 Rosso and Ritchie left the team and Merrick was paired with two new co-hosts, one of who, Ricki-Lee, called it quits at the end of 2010 after less than a year on air.

The Nova brand has now reached maturity. It is not so fresh or different any more because listeners have got used to it and other stations have repositioned around it. It is, however, a consistently performing station that continues to do well for DMG Radio Australia. Tracking its first ten year product lifecycle from growth, through maturity, to decline and rebirth is illustrative of both audience reactions to well researched new brands and competitor reaction and repositioning in the face of a new challenger.

Brand extension

Nova's alternative music positioning and relaxed on-air style carved out a niche for the station, but Nova was wise not to go too far from the middle of the popular alternative format despite some segments of its audience also enjoying dance and trance music.

With the introduction of digital radio DMG was able to launch new stations, one of which became a brand extension of Nova. In April 2009 NovaNation was launched, targeting the dance music loving segments of the existing Nova audience and other dance music followers who either listened to community radio stations or turned off their radios altogether and listened to CDs and MP3 of their favourite dance tracks.

While digital radio is still in its early days and ratings success for NovaNation is not yet known, the format is successful in many other countries and is expected to do well here over time. Having established the value of the Nova brand to the audience, it was a sensible strategy to extend that brand to chase a specific audience segment and grow the company's potential reach into the future.

USEFUL WEBSITES

<www.aftrs.edu.au/radio>
<www.arbitron.com>
<www.au.nielsen.com>
<www.bbm.ca>
<www.dmgradio.com.au>
<www.nova969.com.au>
<www.novanation.com.au>
<www.rajar.co.uk>

17. TORQUE RADIO: THE RADIO FEATURE

Tony Barrell

Driven hard, the audio feature is dangerous.

The art of constructing radio feature programs is experiencing a renaissance as podcasts reignite demand for this type of program. The first part of this chapter is a rhetorical analysis of the value of the audio feature. The second part offers a range of practical suggestions based on experience and observation.

FULL-EAR AUDIO

Whether it is about the secret life of water buffalo, government defence order bunglings, agony on death row or the women behind Brett Whiteley, there is a widespread expectation that a film or TV documentary has to do with factuality, reportage, realism or truth. Revelation, enlightenment and, occasionally, entertainment are after-effects. The same is true of radio, but the audio feature is less familiar because it has been marginalised from mainstream programming.

The big difference between radio and TV is that audiences still expect TV programs to be discrete, stand-alone entities. Radio, however, has for the most part moved away from ‘built’ programs to flow formats.

There is another contradiction between the two media. Most popular TV material—drama series, ‘soaps’, documentaries, ads and even the news—is highly contrived. Programs depend for their credibility on professionalism and polish, and never seem 'real'. As viewers we are so used to the artifice that we are complicit in it. The continuing appeal of 'live' quiz or panel shows suggests that, however inane they may be, audiences value unpredictability and yearn to escape being programmed. Something not meant to *might* happen. This is a key factor in the success of reality TV and the appeal is further exemplified by the consistent high ratings for funniest home video shows which may not be 'well made' but are always 'real'.

Radio, on the other hand, has become bland because it *is* live. Even the studied provocations of the shock jocks are well cushioned in the comfort zone. Most mainstream radio programming, including output from public broadcasters such as the ABC's metropolitan and regional stations, relies on flow format with live presentation of talk or music, the dynamics of which is homogeneous. It is live, but it is even, controlled, regular, and the only 'unreal' elements are the ad breaks. These add the unpredictability that completes the dynamic, but they are artificial. In both content and in formal terms, flow radio is featureless.

The extended radio *feature* does not fit the flow format. Like the ad it is manufactured, but it also has to 'stand alone' in its own reality. It may even be worth hearing more than once, but it gets in the way of the rest of the dynamic and is anathema to flow-format programmers simply because it is too long. Flow programming's main concern is creating continuity through the frequent presence of a familiar or recognisable personality. Talk radio provides companionship and a sense of interactivity either with the unfolding agenda or with the spontaneous discourse between announcer and listener, and has largely marginalised other forms of radio, except music.

Schedulers continue to deny the feature a high-profile presence because it is expensive to make and the public has changed since the days when everyone sat around the radio with their eyes closed. Even the ABC's national networks are reluctant to put features in regular prime time slots on weekdays, although downloaded and podcast delivered features are facilitating a resurgence of the audio feature.

When a good radio feature finds an audience it has more impact than continuous babble. It may not be 'efficient', but it is effective. There does seem to be a latent demand for what has been identified among under-40s as an uninterrupted 'intensive engagement' experience. It has been used to explain a preference for watching cable TV channels, and there is anecdotal evidence to suggest that it could be true of listening. People often say that they had to stay in the car to hear the end of a feature long after they had finished their journey. Sales of spoken-word audio-books on CD and online indicate an unsatisfied demand for listening enjoyment. It is assumed by schedulers that this market is not worth programming for. It may eventually be served by on-demand digital pay services.

'Feature' is a more useful term than 'documentary', which is just one kind of feature. Long or short, a feature need not be non-fiction and it can be pure *journalism*—a simple audio record of an event—or a testimony; it can be conversation without mediation or intervention by an announcer (again, documentary in the strict sense).

There is no such thing as objective representation of the truth 'as it is'. Even journalists who think they have retrieved facts are still working to a preconceived world view or agenda set by their profession's standards, their own ethics and deadline constraints.

A feature can be paced to present a unique dynamic construct in its own space and reality. It can be a 'slice of real life', actuality, or an event that has no interviews, narration or mediation by a chair or presenter, just actual sound. It can be a carefully written historical, biographical, literary or philosophical rumination, meditation, exposition, performance, satire. It can be a fantasy.

A feature can be noise and excitement. It can use the techniques of drama. It can tap memory and emotions. It can be poetic. The feature goes beyond the simple, literal presentation of facts, opinions and explanatory narration. It is an experience that can be heard and enjoyed more than once. An audio feature is pleasurable to listen to, an intense and consuming experience, a bit like going to the cinema or listening to a CD.

An audio feature may have direct access to the listener in much the same way a film or play might have. It may be tightly edited with complex montages and mixes, but it derives its appeal from being a direct auditory experience.

Listening to radio may seem as passive as watching TV, although the difference is listeners can collaborate with the producer to provide the essential imaginative response that gives the feature its sense and purpose. The feature takes liberties with the human capacity to perceive and understand through a form of Gestalt listening. The brain seems to be able to store and compute associative sounds that open it up to profound, sometimes disturbing, experiences. Listeners can negotiate spirals of audio stimuli to make their own meanings. Active listening is both creative and involuntary.

The program-maker constructs the logic, the means by which listeners move through an idea, a time, or a space. It has to have momentum and direction and, of course, it can be deconstructed by listeners even more attuned to its meanings than the producer.

The response by listeners to experiments with the audio feature's form, the way the sounds are put together, can be positive or negative, but generally a successful audio feature works on many levels, sometimes simultaneously, in a way it is hard to replicate visually. What is perceived by a listener may be impossible to articulate in literal terms. Many features achieve their best effects by an osmotic process; words, music and sounds, blending as an experience for which there is no simple explanation—the product of 'intense engagement'.

Audio images can be arranged, heard, felt and understood in a non-literal, non-linear way. The mind engages in active listening, storing, ordering and even re-ordering audio material almost subconsciously, using the clues and patterns left by fragments, as well as solid expositions to create three-dimensional images that take involvement far beyond the common linear listening most radio demands and imposes.

A feature does not follow the form of cricket commentary—miss a ball and the game goes on. But it can use the techniques of visual coverage—the replay and foreplay, the flash forward, the precognitive hint about what is to come, the placement of the clue that makes listening to a feature an enjoyable interaction, a puzzle the listener takes pleasure in assembling. The listener supplies the missing parts—the vision, the idea, the meaning. To realise this potential a program-maker has to break the linear progression of the rest of the format and take the listener out of the frame. They have to grab the listener with traction and torque. This kind of radio is direct. More like smell.

The radio features that survive are more likely to follow what I think is a limited version of the form—the narrated current affairs *documentary*, based on authoritative journalism. Such features are not made primarily for auditory enjoyment, but to demonstrate a commitment to in-depth analysis on important public issues. Public broadcasting documentary features as provided by the ABC must be socially useful, and either conform to the topical agenda, reveal new evidence about a public issue or give insights into specialist subject areas such as science, history, religion, art and social history. They include ABC Radio National programs like *Background Briefing*, *Encounter*, *The Science Show*, *Hindsight* and *Street Stories*, most of which are first broadcast on weekends.

Featurettes or *packages* with narrated scripts, grabs or inserts, occasional background music and sounds placed to provide illustrative cues and rhythms offer an alternative, but programmers and commissioning editors prefer program-makers keep to the dominant agenda, with relevance and news values favoured above the listening experience. For both long- and short-based features, creative auditory techniques must be used to enhance relevance.

Even if features are further marginalised by mainstream free to air radio they will continue via downloads, podcasts and on community radio, which are creating new demand for these well-crafted pieces of work. With the advent of economically priced digital desktop editing systems, features long and short are most likely to be 'put out' on contract, rather like other IT innovations such as webpage design. Short packages are often called 'pieces', and outsourcing them will be not unlike the way the textile industry of the early 19th century put out the making of individual cloth pieces to home-workers.

Editorial control for outsourced audio features would be maintained by guidelines that regulate form as well as content. It is probable that the technical quality of the audio image—which influences aesthetic quality—that the ABC struggles to maintain will not be a major consideration for such work.

Anyway, let's assume there will continue to be outlets for such material in both old and new media.

DOING IT—JUST

Audio features can and should be made out of anything and everything. There are few genuine rules. All kinds of habits and preferences have been given the status of best practice because they save time or they suit the hierarchical editorial structure that is making the decisions about what should and should not be done.

Journalistic editorial habit assesses proposals and submissions for feature production for their appeal, strength or relevance of the story. *Relevance* has assumed great significance, but it is not always well enough defined to be transparent and it is often judged on instinct, rather than on public criteria.

The over-reliance on *story* is also problematic. To me 'story' says bedtime, spoon-feeding and a patronising attitude that devalues the potential for a feature to take off and to take listeners with it. I try to put the feature beyond the territorial limits of storytelling. A feature should have an *idea* at its core, and maybe more than one. The value of radio is that it is so multidimensional, capable of following and elucidating more than one idea. The story is important, but only as methodology, the means by which the exposition develops, the meaning unfolds, the way the feature is made, the telling, rather than the 'it'.

Another overworked term is *concept*. Its paucity of value is epitomised by the fashion for lone-word concepts: ‘money’, ‘water’, ‘time’, ‘evil’, ‘mummy’; it offers options without direction to abuse the flexibility and freedom of the audio environment. Concepts are best left on the back of the matchbox. They are for people who pitch, but do not make.

Structuring a feature is not dissimilar to outlining an essay. You need a form or frame, some chicken wire to pin the pieces to. Take risks with structure and presentation. Bend the wire. Twist it. Structure can be circular. The ‘conclusion’ may be reached before the argument is over.

Creating the *structure* for a feature can be a methodical process. You record and assemble things according to a script that defines every element exactly as it would with a play written in dialogue. Newspapers and magazines use headlines and breakouts, a novelist introduces characters with nuances, rather than straightforward explanations. Poetry is both direct and allusive. The radio feature can be all that and more.

What I call the ‘organic approach’ to structure sees the development of structure begin as soon as recording starts. Many program-makers feel guilty if they have not worked out their structure at the research stage. You hear executive producers demanding to be told ‘the story’. No need to panic. Organic features do not have executive producers and by ‘story’ they usually mean structure, and even the most sceptical can be settled by a good exposition of the idea—and a general indication that you know where it starts and ends. As you listen to the recorded material before editing, better ideas for structure always emerge—and continue to do so long after the thing has finished.

The length of a feature depends on how long a listener can stay with it. This has to do with pace, rhythm and phases of the moon, not whether or not something or someone has to be included for protocol’s sake. There is a world preference for the half-hour, but that can be anything from 27 minutes to 29.30 minutes. Warn everyone you record that they may not be in the feature because of time factors.

Then there is the tyranny of the *interview*. As the accepted working basis for every kind of talk radio, the interview, like talking about concepts and stories, is a hard habit to shed. Eminent broadcasters collect the people they have interviewed like some people collect 1967 Holden utes: they are all the same, they are all different, and they are all prone to rusting. Although pursuit of the interview as great TV has had some well-publicised disastrous failures, these calamities have not changed the standard belief that the interviewer is fairly close to a god. There is a widespread assumption that great interviewers are essential to the interpretation of meaning, and that for a subject to be properly understood by listeners it is best done by an interviewer who is frequently heard. In some professional circles being a good interviewer is still assumed to be a step to celebrity status.

Recording people on tape for features is not interviewing. It may rely on testimony, recollection, experience, observation, but it is very different from getting answers to questions. The interviewer here is not seeking 'yes', 'no', or even 'maybe' answers or defensive responses. There may well be conflict, but it is not an interrogation. The interviewer may well be absent from the final cut.

A respectable current affairs or celebrity interviewer would abhor the leading question but, for the feature, it is often essential to prompt memories or attitudes, so questions should be selected and presented accordingly. They should also take account of the personality and inclination of the subject, not whether or not they are good talent or hiding something. A clipboard stacked with biographical background sounds as bad as it looks.

What is usually revealed by interview is mostly reflective, past oriented. Social and oral history features are very popular among producers young and old, but people do not interview each other in real life. Try conversation.

Recording *interaction* among people is much more interesting—joking, arguing, fighting, anything that does not start with the response 'well, er, basically . . .'. Life as it is happening is harder to record, but it is more graphic and may minimise the need for production studio artifice. Maybe.

Jason and the Thunderbirds, a 40-minute feature made in 1992 by Mairi Russell for the BBC, was about the barely acceptable social behaviour of a young stud and his human mascot, 'Wee Maxie', on a Glasgow housing estate. It seemed to be a natural, rough-edged, fly-on-the-wall docu-soap, but it was really a complex mix of interviews, discussions, actuality, all trimmed to the max—no section lasted more than 30 seconds without some kind of transition. It was mixed to sound like a flowing piece of real life, which it was not. Many people who hear it hate Jason but are drawn to the technique—but the original recordings, frank interviews and especially the interaction with him and his relatives could only have been made because Mairi had a very close relationship with the subject which depended on trust, something that can easily be destroyed when the feature is broadcast according to pragmatic decisions made far from the scene of the action.

On ethical questions of *representation*—you are not trying to re-create the 'truth', but rather a fair version of your perception of it, and this requires creative imagination as well as exact recordings of what happened. What is fair to you may not be fair to the subject. Obviously, you must not edit someone to say the opposite of what they mean and you should not leave out an important qualification that, at the time they were recorded, they insisted be included.

Creative reinterpretation of public domain material such as cutting up speeches, archives and so on is sort of legitimate under copyright laws because courts have sanctioned *appropriation* of material if it is for the purpose of comment, satire, even lampoon—but do not rely on it. Not all courts will be in agreement, and even if they have a weak case the corporate interest that feels offended has the deepest pockets and is most likely to appeal decisions favouring the program-makers. It can be an expensive and hair-raising gamble hoping the highest court will favour your case.

Let people know that you are recording. Let them know that what they are saying will be edited and may be included together with other people with other points of view. There are cultural differences to be considered about what should or should not be said or heard in public and some people who are genuinely reluctant may be afraid to resist your blandishments. Some may only want to take part if they can be consulted about, or be involved in, the production process and hear the material before it is broadcast. You have to make your own decision on that and keep to it. If you agree to it live with it, but unless it is a genuine collaboration it is not advisable.

Investigative documentary, based on reportage, may demand other knowledge of events, contemporary or historical, names of many people, understanding of legal procedures, and judgment about conflicting accounts of events or evidence. When there is a great deal of detailed background material like this to absorb, remember: relate and make sense of it in condensed form. Spoken *narration* can be of great value, but it still has to be written with a feeling for how it integrates with the rest of the material. Narration should never be left to last as an additional obligation. It should be part of the structure and written as the feature is compiled. It can be recorded in situ, on location, with verbal descriptions of the scene.

For more experiential features, narration poses a 'presence' problem that relates to the overall radio station or network format and its demands for mediators, hosts, announcers and interviewers to make frequent and eventually intrusive appearances. Talking softly in a monotone does not make it easier on a listener's ear. Often a feature producer may only want to say something at the beginning to explain what is to follow, but thereafter feels a compulsion to keep providing links and pointers at regular intervals for no other reason than to create an aural symmetry with the talk format. It can preempt the capacity for the material to speak directly to the listener. It may be necessary, but it can also be a failure of nerve.

The BBC made a popular series called *Letters to Myself* that consisted of a long interview with someone who had also written a diary intercut with readings from that diary by an actor. Nothing else.

Often it is what is going on in the background that imparts meaning, clues, authenticity. Wild sound recording is an art and should be developed separately from interviewing. Many producers wave mics around as if they were cinema ushers showing people to their seats. The mic is the technical representative, not only of your ears but of those of the listener. Get to know about other kinds of mics than the simple cardioid condenser used for news reporting. Use headphones and try and work with a sound recordist.

Good recordings are the basis of good feature-making. Every place has its own tone and insignificant or distant sounds take on more presence in the broadcast medium. Avoid missing out the best material because you are only thinking about recording interviews. There is a term used in filming, 'close but wide', meaning getting close to the subject matter but using a wide-angle lens so that there is a lot more going on in the picture. The mic can be used in the same way. There is always a lot going on anywhere. Be aware of it and use the mic accordingly.

Listen to all your recordings, especially the unusable rubbish, and make a legible log of everything, not just the good bits. Reapproach it all with open ears—there will always be things there you did not hear during the recording. Next, be ruthless. Digital editing may make it easier to navigate, but hard disk space imposes a limit on the amount you can digitise and it has to be categorised and separated into manageable clips.

Background sounds put the listener into the location, each of which has a distinctive *atmosphere* or ambience however subtle or quiet. Atmospheres can be helpful if you want to space out your speakers instead of cutting them hard. Digital editing allows for sampling and extending fragments of sound into a lengthy track, but it is much better to record separate atmosphere tracks a minute or so long and then some close-up aural 'details' such as dogs barking, taps dripping, trains passing, guns going off, that may be useful as audio punctuation points. You do not have to use them in the final assembly, but if they are not on the tape you have no choice and it is an enjoyable practice.

Some sounds you do not want. Radio or TV sets, refrigerators, airconditioning units and even fluorescent light tubes can spoil your recording and limit your editing options. If you want them in, fake it: record them separately and add them in the mix. Consider your use of *music*—this needs great care. It is easy to bring music in for dramatic or moody effect, but getting it 'out' can be a problem. You can use it to change the scene, just as in a film, but sound and atmospheres can do that also.

If you have problems deciding where to end a feature it is because it is already too long. Like this.

18. RADIO COMEDY

Ian Heydon

> An Englishman, a Scotsman, an Italian, an Australian, a Pakistani, an American, a Jew and a duck walk into a bar and the barman says, ‘Is this some kind of joke?’

Humour is a funny thing. A case of different jokes for different folks.

What is hilarious for some is death on a stick for others. And for radio comedy to work, it has to really work. A mediocre drama or ad can get by with a deep voice or some passionate music, but when comedy dies it is immediate rigor mortis.

It’s not just the words that make comedy work, though. It’s getting the mix right, and here we take a stroll down the aisles of the comedy supermarket to see if we can select the right ingredients.

Writing comedy for radio is a craft, not an art, and it comes with a couple of contradictions. While it has to be written to appeal to the sense of humour of the audience, if it is not funny for the creator chances are it is not going to be funny to anyone. Comedy timing improves with rehearsal, but once familiar it can lack spontaneity. If comedy is bland, it is boring. If it offends, there will be complaints. Historically, religious satire gets more complaints than satire about sex or politics. Incidentally, the 1970s *The Naked Vicar Show* was so named because of its potential to offend.

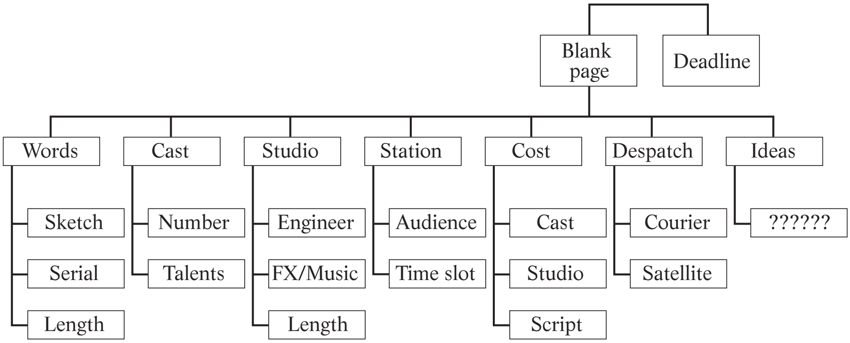
Comedy has been a part of radio from the beginning. As well as *The Naked Vicar Show* there have been *McCackey Mansions*, *Yes What?*, *Life With Dexter*, *Monty Python's Flying Circus*, *The Samuel Pepys Show*, *Captain Kremmin*, *How Green Was My Cactus?*, *The Year My Country Broke*, *The X-Fools*, and so on. Comedy features in many ads. It is part of the staple breakfast audio diet and important in many drive programs.

And now, another contradiction—the writer's biggest hurdle and inspiration . . .

The blank page. It is scary, but necessary, and it works hand in hand with the deadline.

The closer the deadline, the less blank the page. The best way of attacking the blank page is to un-blank it. Give it a heading, an episode number, FX—anything. The un-blanked page is your friend; the blank page is your enemy. The deadline is both friend and enemy. Miss it and I am afraid that you are in the wrong game, and that applies to all facets of the broadcasting business. Having said that, there is no reason for undue stress. Radio, unlike print, eats up material and spits it out in the time it takes to broadcast, so there is no point in being too precious about words. Do the best you can in the time allotted and learn from your shortcomings. Whether you have five, ten, 20 or 40 hours in which to get something written, chances are the best stuff always appears from nowhere in the last hour or two.

According to the Bible, in the beginning was the word. But before the word there had to be the blank page, and a blank page in radio comedy can have a family tree that looks like this:



RULES OF RADIO COMEDY

And so to the rules of writing successful radio comedy.

Rule 1 There are no rules.
Rule 2 Every joke has a set-up, a feed and a tag. Unless it does not (see Rule 1).
Rule 3 Jokes work best in threes (also see Rule 1).
Rule 4 Themostimportantthingincomedyistiming.

Here is an example of the traditional set-up, feed, tag:

VOICE 1: My dog's got no nose. (Set-up)
VOICE 2: How does he smell? (Feed)
VOICE 1: Terrible! (Tag)

Comedy has progressed a bit since vaudeville days. Let's look at the Steven Wright one-liner: 'What's another name for thesaurus?' Is that a set-up, a feed or a tag? It is all three. The feed and the tag are internalised by the audience. The listener automatically thinks, 'I don't know, what is another word for thesaurus?' then laughs at the tag of realisation.

In a knock-knock joke . . .

VOICE 1: Knock knock. (Set-up)
VOICE 2: Who's there? (Set-up)
VOICE 1: Harold. (Set-up)
VOICE 2: Harold who? (Feed)
VOICE 1: Harold are your children? (Tag)

And the lateral 'thesaurus' example . . .

VOICE 1: Heard the latest knock-knock joke? (Set-up)
VOICE 2: No. (Set-up)
VOICE 1: You start. (Set-up)
VOICE 2: Knock knock. (Set-up)
VOICE 1: Who's there? (Feed)
(Tag)

And now, let's go shopping!

D.ORIS: They're charging the same for less. Have you noticed that the cardboard cylinder in the dunny paper roll's bigger?
MERVYN: Can't say I have . . .
DORIS: Well, it is, and that can only mean less paper.
MERVYN: How'd you come to pick up on that then?
DORIS: Not much else to look at when you're spending a penny, apart from the empty bird cage . . .
MERVYN: You don't get much for a penny . . .
DORIS: Darned right you don't. And it's not just bathroom stationery. Look how small these eggs are . . .
MERVYN: Struth, how do they do that? Whack an O ring up the chook or something?
DORIS: No, they just make the chooks smaller. Look at this pathetic excuse for poultry. Must be a size two. I've got slippers bigger than that. And look here, sherry comes in smaller bottles now, too . . .
MERVYN: Well, knock me sideways and twiddle me pinkie. Sort of like an empty kamikaze plane—two nips missing, so to speak . . .
DORIS: Too right. Well, here we are, the checkout. Go on, sonny, pillage me purse . . .
SFX: BAR CODE BEEPS UNDER.
BOY: One bottle of soy sauce . . .
DORIS: That's not sherry?
BOY: No.
DORIS: Damned eyesight. And I thought I'd become a stayer . . .
BOY: Packet of Koolmints . . .
DORIS: Koolmints?! Not eggs?
BOY: No.
DORIS: No wonder they're buggers to crack.
BOY: One quail . . .
DORIS: Not a chook, eh?
BOY: No.
DORIS: Hmmm.
BOY: And one roll of paper towels . . .
DORIS: Not toilet paper?
BOY: No.
DORIS: Well, thank goodness for that. I thought me bum had shrunk.
SFX: THEME OUT.

Rule 5 Some schools of thought say, when in doubt, whack in a bum/poo/fart joke, but type of humour aside, let's look at a couple of structural things.

SFX: SUPERMARKET ATMOS UNDER.
DORIS: I tell you, Mervyn, these supermarkets rip through your pension like borax through your budgie.
MERVYN: Pardon, Doris?

The background sounds of the supermarket called 'atmos' sets up and supports the picture in the listeners' minds, but to ensure the picture is there Doris also tells us that we are in a supermarket. She also tells us her age and the name and gender of her companion. Mervyn's response lets us know Doris by name, sets up that he is getting on a bit and prompts Doris to explain the premise for the sketch. Now, there is nothing here to tell us whether Mervyn and Doris are the central characters in their own comedy series, or if this is just a one-off sketch on how supermarkets are increasing profits.

If it were a series, lines like 'Well, knock me sideways and twiddle me pinkie' are most important. These become character lines that listeners look forward to and perhaps pick up and repeat, such as Homer Simpson's 'D'oh', Max Smart's 'Would you believe . . .', Jerry Seinfeld's 'Not that there's anything wrong with that' and so on. In Mervyn's case, the lines would become a variation on a theme. Tomorrow it could change to 'Well, slap me senseless and tootle me tootsies', or whatever.

And regarding the humour itself, there is always the choice of going for the predictable or the unexpected. Both can work. If listeners predict the tag to a sketch or joke it can still be rewarding. A lot of people prefer to think 'I bet he's going to say . . .' and when he does, react with, 'Ha! I knew he'd say that!' Personally, I would rather be surprised. One of the best ways to find the unexpected is to find the logical outcome and then discard it.

Words

As good old Monty Python once said, 'It's not just the words, it's getting them in the right order', and the words have a different sense of order depending on whether the comedy piece is a sketch, part of a series, an episode in a serial, an ad, or live to air.

The sketch

A sketch is basically joke driven. Good characters help the sketch, but the idea or joke is the premise and anything goes. At first glance this looks like the easiest form of comedy to write but it is not usually the case. Unless the sketch is a parody or satire based on a known identity, there are no established characters to draw on and the writer needs to come up with a new idea, characters and situations for every segment.

The series/serial

The series/serial is more character driven than the sketch. Jokes are important, but much of the humour can come from the characters and conflict. The major differences in a serial are the need to end each episode with either a cliffhanger or a good reason for listeners to return, and to begin each episode with some form of recap for those who missed the preceding episode.

Before embarking on an episode in a series or serial there are two areas of planning. First, rough out the direction the series is to take and be sure that the idea will sustain over time, say 65 episodes over 13 weeks. Second, get to know the characters well. A good idea is to write down everything you can about each character—even things that may never appear within the series such as hair colour, educational background, likes and dislikes, type of car driven, favourite TV show/film, favourite foods, and so on. If you know your characters well their dialogue flows more naturally.

The ad

Because ads are repeated it is wise to use humour sparingly and make it come from the characters or situation. A joke, no matter how funny, usually does not warrant repeating.

Live-to-air humour

Live-to-air humour should appear as spontaneous as possible. It is important for the deliverer to remain faithful to character and humour and, again, to think of the long term. Let's say a person starts a new job as a breakfast announcer and throws in a good gag before every music track. The yardstick is in place for that to happen every day and, whether the humour is original or not, it may be hard to sustain.

While plagiarism is not to be condoned there are a number of places to find legitimate sources of humour by hunting and collecting. The internet is a great source. Joke books can be handy and there are a number of radio prep syndication companies. The problem with these is that much of the humour is either too parochial or too corny. It may be worth a trial subscription to one or two of those companies to study their formula and then watch TV, read papers and magazines and try to find your own humorous angle on topical events. The news item, when repeated, is the set-up and feed, the funny twist is the tag.

Many new jokes just strangely appear with no link to an originator, and there are a number of 'generic' jokes that can be altered to suit a situation. The following couple of one-liners are pretty much one and the same joke . . .

> Two men walked into a bar—you'd think one of them would have ducked.
>
> Two women walked into a building—you'd think one of them would have found the door.

And that formula could be taken to a topical comment like . . .

> Did you see the prime minister walk into Parliament House yesterday? You'd reckon he would have remembered where the door was.

It can be worth keeping a folder or book to collect jokes that appeal to you. They can be altered later, or even just drawn on if the occasion seems right . . .

> It was so cold this morning, on my way to work I passed a flasher who was describing himself.

A good example of recycling old jokes was *Hey Hey It's Saturday*'s John Blackman—he almost made it an art form—and the irreverent Graham Kennedy's attitude to resurrecting jokes was 'someone turns nine every day'.

If you hear a joke that appeals to you but it belongs to someone else, you can always give credit in this way: '. . . it reminds me of Billy Connolly's thoughts on the first person to ever milk a cow—what was that guy thinking?!'

The length of a sketch is important. Ten years ago a three-minute sketch was pretty average. Thirty years ago it was 15 minutes. Now anything over two minutes can seem to drag. And a good 60 seconds is preferable to a padded, mediocre 90-second sketch.

> *Rule 6* Conflict is an important ingredient in humour—parent vs child, man vs woman, person vs society/bureaucracy, person vs elements, and so on.

The following scripts are examples of using conflict as a device for humour.

CAST

Unless the writer is also the performer, someone has to be chosen to deliver the scripted material. It often helps greatly to know who is to perform the piece before starting to write.

In the previous supermarket sketch the checkout attendant was a boy. This was not done because of equal opportunity, but because it was written for an acting team of two males and one female. With the same team a female at the checkout would have meant two male pensioners or one female doing two voices.

In comedy, using performers who have a number of voices in their repertoire can be both cost effective and valuable in having an alternative for a character that may not be working.

To discover the importance of correct casting, try allocating some of the sketches in this chapter to different performers and compare the end product. In the comedy supermarket trolley, talent is the most important ingredient after the script. Speaking of which . . .

FX: CHATTING MURMURS BACKGROUND.

SLIMEBALL: Well, hi there, babe . . .

WOMAN: Hello . . .

SLIMEBALL: Come here often then, hmm?

WOMAN: Well, now and then . . .

SLIMEBALL: Cool. My first time actually. But who knows, we may be seeing a lot of each other, know what I mean, hm?

WOMAN: Well, no, I . . .

SLIMEBALL: You see, I can tell at a glance what sort of woman you are, know what I mean, hm?

WOMAN: Look, I . . .

SLIMEBALL: Single mum, am I right, am I right, hm?

WOMAN: Well, yes, I . . .

SLIMEBALL: Got a dog, too, bet there's a dog, am I right or what?

WOMAN: Yes, you're right . . .

SLIMEBALL: Uh, huh. And even though it's probably a Heinz-type mongrel with fleas and eczema I reckon you still fork out for the expensive brand that the top breeders recommend. Am I right or am I right?

WOMAN: Well, yes, but . . .

SLIMEBALL: Here, test me on this one and see if I'm right, know what I mean . . . I reckon you're a Good Onya Mum Low Toxic High In Fibre Non Irritant Kind On Hands While You Toughen Teeth Absorbent Ozone Friendly Twenty Cents A Bowl Chicken Tonight Life's Pretty Straight Without Those Heavy Days Ought To Be Congratulated type of chick. Am I right? Huh?!

WOMAN: Yes. Now put the items through, please. And next time I do the shopping I want a girl at the checkout.

SLIMEBALL: Cool.

FX: THEME OUT.

Unlike the previous supermarket sketch, for the tag to work it is imperative that listeners do not work out that the sketch is set in a supermarket until the tag is delivered. The background atmos of people chatting should almost sound like a bar. While many different female actors could perform the woman's part, the sleazy character and the wordiness of his long speech at the end makes the male casting essential.

Rule 7 A writer should never be precious about words. If it does not work, whether it is the fault of script or talent, chuck it out. Better a joke be put to rest with dignity than die tragically in public.

DIRECTION

It is easy to discount the importance of direction in audio production. In stage, TV, or film it is obvious. Actors need to be told where to walk and cameras need to be told where to point.

Direction is just as important in audio production. When a script is written, the writer should hear each character speaking. Reading the script aloud can help this. The trick then is to be able to explain that to the actors. The way *not* to do this is to perform the piece; if the writer can perform it properly, actors are not needed. If actors are needed they should be allowed the creativity to perform, adding to the script. In the above sketch the initial information from the person directing may be something like: 'The guy is in his early twenties, just out of his acne phase and smooth, but oily. The woman is attractive, late twenties and starts off quite friendly and pleased with the attention, and then gradually becomes irritated . . .' The sketch may work better if the woman is uninterested throughout. Maybe the male's character bits ('am I right or what?' and so on) do not work and need to be deleted or altered. It is important to be able to articulate any changes to be made, and tact can sometimes be the director's best asset.

The other area for direction is in post-production. Most engineers have a range of FX and background atmos at their disposal. A good director can explain the 'feel' required and can spot the right effect when listening to a number of choices. Again, tact. 'Could we try it with another effect?' is preferable to 'That's useless'.

STUDIO PRODUCTION

The other important ingredient is studio production. Most engineers tell you it is the most important element. However, without a script and a voice there is not going to be much to record or to produce.

It helps to know your studio and engineer, with regard to the state of the equipment, the depth of FX and the skills and limitations of the engineer, before writing a script. There is no point writing elaborate FX if the studio does not have an extensive library. If there is no effects library, many effects can be created manually. A cup, saucer and spoon can create enough theatre of the mind for a breakfast scene.

Sound effects, music and atmosphere can add to a sketch. If they are overpowering they can detract. In some cases they can be the joke. The following sketch should not have been written before finding out if the studio had a barcode beep effect . . .

FX: SUPERMARKET ATMOS UNDER.
FX: BARCODE BEEPS AFTER EACH ITEM IN GIRL'S FIRST LINE.
ANNCR: And at the supermarket again . . .
GIRL: Steradent . . . Depend . . . Licorice Allsorts . . . Mylanta . . .
FX: BARCODE BEEP.
GIRL: Sorry. That was nine items. This is the eight-items-or-less lane.
DORIS: Oh. Well, don't worry about the Mylanta then.
GIRL: But I've already beeped it.
DORIS: Pardon, girlie?
GIRL: I can't unbeep it. It's already done the total, see, 22 dollars 20.
DORIS: Well, just take the Mylanta off the total.
GIRL: What do you mean?
DORIS: Well, how much was the Mylanta?
GIRL: Oh, I see! Right . . . It was . . . um . . .
FX: BARCODE BEEP.
GIRL: It was beep.
DORIS: Beep?
GIRL: Yeah. That's what the barcode said. Beep.
DORIS: I remember when a barcode was no thongs and singlets after six.
GIRL: I don't make the rules, lady.
DORIS: Look, girlie, you've got the total beep, just subtract the Mylanta beep.
GIRL: Subtract?
DORIS: Yes. Take away!
GIRL: Of course it's takeaway. This is a supermarket.
DORIS: No. Take the little beep away from the big beep.
GIRL: Does anyone know how to take a little beep off a big beep?!

MANAGER: (APPROACHING) Is there a problem here?
GIRL: Huh. It's the manager. Now you're in trouble.
DORIS: I just want to know how much the Mylanta is . . .
MANAGER: Oh! Is that all . . .
FX: BARCODE BEEP.
MANAGER: There. It's beep.
DORIS: Beep is not a price. If it was there'd be a TV show called The Beep Is Right!
MANAGER: Of course beep's a price. Otherwise your eight beeps wouldn't have added up to 22 dollars 20.
GIRL: Nine. It's nine items, Mr Pringle.
MANAGER: You're in the wrong lane.
DORIS: That's why I have to give one back. Unbeep the bloody Mylanta!
MANAGER: Ohhh, it's all too hard, just take the lot.
DORIS: (FADING) Hee, hee . . . works every time.
MANAGER/GIRL: Silly old . . .
FX: BARCODE BEEP.

STATION/AUDIENCE

The station broadcasting any comedy dictates the style and content by way of its format and audience demographic. If a series is being produced for Triple J or Triple M it can have a high level of sex, swearing, sickness and absurdity. A series for an easy-listening format with an older demographic has to be far more gentle.

Timeslots also affect the style of humour. Breakfast is traditionally more upbeat and risqué than mornings or afternoons. Nights can be for experimental, cult-type shows. If the comedy is being syndicated to a number of stations, the producers have no assurance of broadcast times as this is the station program director's (PD's) decision. This may dictate that the series is general. If broadcast is delayed by syndication restrictions or time shifted by podcasting, the timeliness of content is also a consideration.

While feedback from stations is important, bending to their every suggestion stifles creativity and prevents comedy writers and producers from 'pushing the boundaries', which is essential. Comedy is an evolving beast—compare *The Flintstones* with *The Simpsons* and *South Park* or *I Love Lucy* with *Seinfeld* and *Friends*. Writing comedy is like writing ads. You have to be comfortable with what you have written and have confidence in it.

COMEDY AND COPYWRITING

As mentioned, humour in advertisements can be tricky, but if used effectively it can make a product stand out from others, especially in a short campaign. The main thing is to give your ad a personality, rather than a big joke. As with other comedy, only use FX where necessary, write as you speak, and draw on how other people speak for characterisation.

Here is an example of some ads written for real estate in Western Australia. I am not sure if they sold anything, but the client was happy and there was good feedback from listeners so the branding worked. The brief was to:

1. Push that auctions create buyers and sellers.
2. Generally cover the importance of choosing the right agent.
3. Specifically target 'a quiet spot ten minutes from town' and incorporate 'a view today, tomorrow and forever'.

If the request had been for a 'straight' ad the copy would have been warm and friendly, along the lines of:

MALE VOICE: Auctions can be scary things. For the buyer and the seller. But that's what makes them work. A buyer has a price in mind—so does the seller—and the auction is just the way of letting the market sort out the fairest price. And, if you want to sell or buy a property, the professional team at Seaview Real Estate can help you. They understand what buyers and sellers go through but, more importantly, they understand real estate. You can trust Seaview Real Estate.

The humorous version went . . .

FX: SUPERHERO-TYPE THEME UNDER.

ANNOUNCER: First there was Superman. Then there was Action Man. And now . . . there's . . . Auction Man!

AUCTIONEER: What am I bid, what am I bid, do I have a bid?!

ANNOUNCER: Yes, Auction Man . . . He's faster than a breeding pullet, able to sell tall buildings in a single sound!

FX: GAVEL BANG WITH.

AUCTIONEER: Sold!

ANNOUNCER: Auction Man. He's professional. He's astute. He's got a silly voice. And he knows his stuff.

AUCTIONEER: Knows his stuff once, knows his stuff twice, knows his stuff three times, sold to the man in the hat!

ANNOUNCER: Auction Man. Out now and available only from Seaview Real Estate. Batteries not included.

And for the specific Bayside Estate ad, there were two versions: a gentle one for AM broadcast . . .

MALE VOICE: Ten minutes. There's not a lot you can do in ten minutes. Boil three-and-a-third eggs . . . see a third of a TV sitcom . . . watch an eighth of a game of football . . . or take a leisurely drive from Geraldton to Drummond Cove. You won't find anywhere more peaceful than Bayside Estate at Drummond Cove. And what a view. A view today, tomorrow and forever. Seaview Real Estate can help you move into much more than a home at Bayside—they'll help you move into a lifestyle. Seaview Real Estate.

And the FM version . . .

SHAKESPEAREAN: Friends, Countrymen, Geraldtonians, lend me your ears. I come to praise the Bayside Estate sale at Drummond Cove. To see, or not to see, that is the question. A mere ten minutes from town and as quiet and as peaceful as a sleep perchance to dream. A room with a view? Nay, a view with some rooms. A view today, tomorrow and forever. Veni, Vidi, Victa. I came, I saw, I mowed the lawn. Thank you Seaview Real Estate. Bayside. It's an estate, not a hamlet.

(FADE UNDER TELEPHONE AND ADDRESS TAG.)

But soft, what light from yonder window breaks, it is the west and glorious is the sun . . .

ANYONE FOR BREAKFAST?

Breakfast shifts traditionally rely upon supplying the listener with a few laughs and some fun to start the day. The energy helps to get listeners going and entertains them in the traffic.

More and more the trend is to have an on-air team or 'crew'. A four-person team could consist of the lead performer, usually someone with a name and reputation for comedy, a 'straighter' sidekick and one or two part-time 'wacky' characters. The synergy, energy and camaraderie shared by the team is usually as spontaneous as their ad libs. They work hard at it.

They are paid very well, as much for getting up early as their comedic brilliance—because that is where the brilliance comes from: pre- and post-production.

Truly 'live' comedy is the only real test of whether humour works for an audience. In a comedy store or a TV sitcom, the audience laughter tells the performer and the audience whether something is funny. Live breakfast comedy is the same, but harder because the laughs are not to be heard. The performers have to have an in-built feel for whether something is working, going on too long, drifting into a bad taste area or whatever. The only real listener feedback here comes through complaint calls or ratings surveys.

Let's look at a hypothetical morning crew. We have our lead performer, a straight person, a wacky character person and a writer. The shift goes from 6 am to 9 am. Set the alarm clock for 3 am because prep starts at 3.30 am.

The team arrives, bleary eyed and not feeling particularly happy or funny. Except for the straight person. He always bounces out of bed and cannot wait to get on air. Everyone else hates him. On air he only has to give time calls, pull the others back in line, intro music and generally just, well, be there. Off air he actually throws in more ideas than any of the others, but most of them are lame. The lead performer kick-starts the day with strong coffee and an anxiety attack and never sleeps well at night because it is her name on the line every day. She gets most of her rest in the afternoons, after a long lunch. Today, Captain Wacky is not comfortable with his used car salesman character. The jokes are beginning to run thin, but the listeners still seem to like it. So it stays. Everyone else vetoes his idea for the sketch about blending Viagra into the food in a nursing home and it takes 20 minutes to script the ad lib 'telephone call from the car yard' sketch for later.

The writer, as usual, is the grumpiest. He stayed up for the late news and *Letterman*, hoping to get some thought starters and now regrets not having had more than two hours sleep, especially as there were no thought starters outside plagiarism. More coffee. Look through the newspapers and magazines. Listen to the news on the ABC. Have a look at CNN.

Thank God for some prerecorded stuff to fall back on and there is a touring British comedian dropping in for an interview. Let's hope he is firing.

And so the two and a half hours disappear with the minutes running faster and faster. As the deadline gets closer, panic and adrenaline kick in. The ideas come, some good and some, well, okay. A trick voice and a groan from the others will make them work.

Six am news and . . . cue the team.

Everyone is happy and working tightly. The opening political gags seemed to work okay. During the following music track they decide they will do them again after 8 am when there is a different audience.

Throughout the morning, during the music tracks, ideas fire backwards and forwards across the desk.

STRAIGHT: What if I use that 'tree falling in the forest' twist . . . you know—if a man speaks in a forest and a woman doesn't hear him, is he still wrong?—and then you jump on me for being sexist?

LEAD: Yeah, okay—then I've got a legitimate excuse to come back at you with 'What do you call that useless bit of flesh on the end of a penis . . . a man'.

STRAIGHT: That'll work.

WACKY: What about—'You know why men look so good when they're having sex? It's the only time they're plugged into an intelligent life form.'

LEAD: No.

STRAIGHT: No.

WACKY: Well, pardon me for breathing.

And so on through the morning with the writer occasionally nipping in with some more hastily written ad libs to rehearse and perform.

Nine am and they got away with it again. Huge sigh of relief and then straight on to pre-production for the next day. Get stuck into the fully produced sketches and anti-ads. The deadline here is lunch and/or home time.

The writer and Captain Wacky have their first beer for the day. The others, more coffee. Whiteboard think tank on the sketches for the next day. Can they get away with that old joke for the tag? Of course they can. Now, need to knock off an ad. The writer comes up with the breakfast cereal 'bland-family-from-hell' idea—it is the only time Mormons have run away from a house. The thought is workshopped, the writer polishes then . . . photocopy, record, lay in the effects and music, mix.

Midday. Pre-lunch drinks and lunch. Remember this is the equivalent of, well, after 5 pm for most workers. Ideas are scribbled on the backs of coasters.

It is no wonder they hate each other occasionally. They see more of each other than many people would in an intimate relationship—and they see each other at their worst.

And as for the real relationship at home: good luck.

'Hello, darling, I'm home . . . No, I've eaten, went to the Boon Chu, haven't had Thai for a while. Hmmm? Oh, just a couple of beers and a bottle of white. Or so. I'm going to bed. Wake me when the kids are ready for their dinner, will you . . .'

A laugh a minute.

But hey, the mortgage is paid off.

OLD GROUND/NEW GROUND

A final contradiction. While it is part of the comedy writer/producer/announcer's job to break new ground, be lateral and think outside the square, there is still nothing wrong with using stereotypical characters or situations. It gives listeners a ready point of reference for their imagination and it saves unnecessary setting up.

A series may be set in a hospital, an airline, a local council, a department store or even a supermarket. The characters in the series may be a golf-playing doctor, a gay flight attendant, a corrupt politician, a lazy public servant, or a shonky car salesman. Where the comedy becomes new, fresh and pushes the boundaries is within the situations and dialogue. Heaven forbid, the characters could even be as stereotypical as a crusty old pensioner, an officious supermarket manager and a bimbo checkout girl. Cue Mervyn!!

FX: SUPERMARKET ATMOS UNDER.

MERVYN: Excuse me, Botty?

GIRL: It's Betty.

MERVYN: Oh. Sorry. They should make those name tags bigger. So tell me, Betty, is it this supermarket's policy to round the price of things down to the nearest five cents?

GIRL: It certainly is.

MERVYN: So this carton of eggs at a dollar ninety-two . . .

GIRL: Is rounded down to a dollar ninety, that's right . . .

MERVYN: No, a twelve-egg carton at a dollar ninety-two means each egg is sixteen cents . . .

GIRL: So?

MERVYN: So I'll have one egg please.

GIRL: Oh. Well, I suppose that's fifteen cents then.

MERVYN: Exactly. There you go . . .

FX: CASH REGISTER.

MERVYN: And now I'll have another egg. There, fifteen cents . . .

GIRL: You're not buying a dozen like this, are you?

MERVYN: Oh, no, no, no, no, no, no, no. I've got six dozen . . .

GIRL: But . . .

MERVYN: No buts about it. That's a saving of seventy-two cents! I've got the right money. Who said you can't put all your eggs in one basket, eh?!

MANAGER: Excuse me, sir . . .

GIRL: Uh oh, it's Mr Pringle, now you're in trouble . . .

MANAGER: Thank you, Botty . . .

GIRL: Betty . . .

MANAGER: Whatever. I'm afraid you're creating a bit of a queue, sir . . . in fact it goes back past pet food, condiments, feminine hygiene, frozen foods, and out into the car park.

MERVYN: Just watch your tone, sonny, or I'll have you rounded down to a shelf packer . . . because in my book the customer is always . . . come on, come on, come on, say it . . . the customer is always . . .

MANAGER: Um, right?

MERVYN: Damned right, right. Right, girlie?

GIRL: Right.

MERVYN: Right! Slap up a ladder and nibble me noodles, I'm right!!

MANAGER: Of course. You're right. Let him off his seventy-two lousy cents. Go on then, off you go. Ta-ta, bye-bye and thank you so much.

MERVYN: Oh, no, thank you. I say, gang, this is the best outing the home ever organised! I'll wait for you all on the bus!

LOTS OF PEOPLE: Right! Okay! etc.

MERVYN: Your turn, Doris . . .

DORIS: These saveloys are joined at the hip. Have you got any scissors, Botty?

GIRL: It's Betty.

FX: THEME OUT.

SUMMARY

A quick recap . . .

- A crook script cannot be saved by excellent voice talent or production. It will just end up a good-sounding crook script.
- A good script can be ruined by bad or poorly cast talent and amateur post-production.
- Use themes, FX and atmosphere only where necessary.
- Un-blank that page. It is not blank through a lack of ideas, but a potential for too many. Un-blanking helps focus.
- Learn to work with deadlines. They can be a great creative tool.
- Before starting a script, be aware of any limitations in cast, production skills or budget. Budget time, as well as money. The more characters and effects, the longer it takes to produce.

- If dialogue is true to the character, it is believable.
- Be lateral, push boundaries, but keep the listeners in mind. Comedy should entertain, not offend.

Finally, comedy is serious business, but it can be fun. Enjoy.

And keep in mind that the pen can be mightier than the sword if the sword is very blunt and the pen extremely pointy.

19. THE TRANSMISSION CHAIN

Gorden Smith

This chapter will provide an overview of the broadcasting station transmission chain and what needs to be considered in establishing such a chain to provide a reliable and standards compliant system.

A technical operating conditions (TOC) document is issued for each station. The document provides the transmission site location, the effective radiated power (ERP), polarisation and the antenna radiation pattern. The TOC document contains the details which the station then needs to develop its transmission chain system, not only to conform to technical requirements but also to the Australian emission standards.

THE TRANSMISSION SYSTEM

For the purposes of this chapter a transmission system is defined as being that from the audio processor to the antenna output.

Audio processor

Why an audio processor? This is one of the most important parts of the transmission chain. It is the component that stops the transmission chain from exceeding the emission standards in terms of deviation (plus or minus 75 kHz). Overdeviation causes the emission standards to be exceeded in terms of the occupied bandwidth and can cause interference to other adjacent services.

People sometimes refer to the 'loudness' or 'sound' of a station. The loudness of a station is, in the FM transmission system, a matter of the modulation deviation. Some stations turn up the transmitter deviation in order to sound as loud as a competitor. The implications of doing this are:

- overdeviation;
- sounding muddy or distorted on small low-cost FM receivers; and
- still not achieving the loudness required.

There are many types of processors. All come with different parameters and at different costs (ranging from approx $2500 to in excess of $20 000). A basic processor should:

- be designed specifically for the transmission system being used. A processor that is not designed for a specific transmission system will not provide the correct processing characteristic for that transmission system;
- have the facilities to process the input signal(s) for mono or stereo;
- have a processing characteristic that processes the input signal in conjunction with the pre-emphasis characteristics being used (50 microseconds for FM and NTRSC for AM);
- have a limiter function to limit from cross-over modulation;
- have a compression function (a soft function to reduce the possibility of overmodulation); and
- have an automatic gain control (AGC) function. This lifts the low-level signals in order that they achieve a higher average.

Some processors have a wide range of set-up controls. This allows the user to set the way the processor handles the input signals and thus set the 'sound' of the station. Care must be taken to make the station sound loud, but at the same time not make it sound terrible. An example is having the processor release time set appropriately for the announcer's breath intake in relation to speech. An example of a processor set up badly is where you can hear the singer's voice drop in loudness when singing over the music.

Stereo coder

The stereo coder, these days, can be supplied in three ways: as part of the processor, as a stand-alone unit or built into the FM transmitter.

In the case of a studio to transmitter link, the stereo coder can be built into the link transmitter. The stereo coder takes the left and right audio inputs and multiplexes these in accordance with the AM or FM emissions standards to provide the appropriate outputs for the respective transmission system. The stereo coder is placed in the transmission chain between the output of the audio processor and the transmission system.

Getting the signal to the transmitter

There are a number of scenarios in getting the program signals from the studio to the transmitter. These include:

- direct connection—transmitter in the same building as the studio;
- landlines—these include standard fixed program lines and ISDN circuits;
- studio transmitter link (STL) connection—using a 850 MHz link (other frequency bands are available) between the studio and transmitter location; digital or analog systems are available;
- internet VOIP and via tunnel VPN circuits; and
- computer wireless systems.

Direct connection

The most direct way to deliver the program from the studio to the transmitter is to have the studio and transmitter in the same building. Connection therefore is via a direct wire connection involving no third parties. In this way there are no ongoing costs for program delivery. It should be noted, however, that having the transmitter and studio in the same building can require special engineering to avoid the RF from the transmitter causing interference with the studio equipment.

Landlines

This is the traditional way to get your program signal to the transmitter, particularly for AM transmission systems. For AM transmission a single ‘program line’ is required, while for FM stereo two lines are required. In all cases the output of the mixer desk or the audio processor is connected via an isolation transformer to the program line(s). Fixed program lines with a frequency response 20 Hz to 15 kHz link the desk output to the transmitter site. In the case of FM transmission lines, they are required to be matched in frequency response, phase and gain to provide stereo operation.

There are few analog program lines being supplied any more. Telstra is now offering ISDN circuits as the preferred way to replace landlines.

To use such a program delivery system ISDN codex are required: one at the studio and one at the transmitter site. Since the ISDN circuits are a digital platform it may be necessary to consider a backup form of program delivery should the ISDN system fail or the connection be lost.

If fixed program lines are used they need to be ordered as 'program lines,' with a 15 kHz equalised audio bandwidth. For stereo there needs to be two lines which are phase and amplitude matched. It is a requirement that approved isolation transformers be used between the line and your equipment at each end of each program circuit.

Studio-to-transmitter links (STL)

There are a number of different types of studio-to-transmitter links, with the common factor being that they use an RF carrier to transport the program from the studio to the transmitter. In Australia, the most common frequency band for the RF signals is between 846 and 852 MHz (850 MHz band). Other common bands are 1.5 GHz and 10 GHz. Other bands are used depending on the availability and equipment. Transmission systems in the 10 GHz band all use digital modulation; transmission in the 850 MHz and the 1.5 GHz bands use a mixture of analog and digital modulation techniques.

The analog modulation system can either carry a single audio channel, as would be the case for a mono FM transmission service or an AM transmission system, or an MPX (stereo encoded signal) where the output of the stereo coder is connected to the STL transmitter.

In the case of digital modulation techniques, a digital coder is required at the input of the STL transmitter and a decoder at the STL receiver output. Common digital equipment can carry two audio channels or four audio channels depending on the configuration.

Such a system provides either two or four independent 20 Hz to 15 kHz audio channels input and output. This system allows the operator to connect the output of a mixer or an audio processor's left and right signals respectively to inputs 1 and 2 of a two-channel digital coder, and to recover the left and right signals from the digital decoder at the transmitter location. Being a digital modulation and transport system, near CD-quality is available over the link system. When used for an FM stereo transmission system, the digital system does not suffer from the loss of stereo separation or increased cross-talk between the left and right channels.

To operate an STL system a licence is required for the transmitter and receiver. The licence has an ongoing annually renewable cost, the level of payment depending on the area where the link is being established. Cities are classed as high density and therefore have a higher cost than low-density (rural) areas. The licence defines the operating conditions and the type of transmitting and receiving antennas to be used. This requirement is specified because of planning and frequency allocation requirements, and is planned in such a way that prevents interference between users.

VOIP

Voice-over internet protocol (VOIP) is a recent innovation being used for program transmission. Suitable codex units have recently become available that can transmit broadcast-quality audio signals over the internet. Some of these units have a fall-back feature should the IP link fail. ISDN is usually the fall-back transmission mode. To use the VOIP, access to the internet at both the studio and the transmitter location is required.

Wireless linking

Some stations have reported using wireless LAN techniques to link and provide audio signal between two points. Such a system requires that a computer be located at each end of the link. In order to get reliable communications and assist with security, external directional antennas are recommended. In order to ensure broadcast quality, high quality sound cards are recommended in the computers. As with all wireless LAN-based networks, security is of prime importance. Because the frequencies used for wireless LAN systems are high (2.5 and 5.2 GHz bands), good line-of-sight propagation paths are required as the RF power available from wireless LAN cards is limited. This in turn limits the distances over which the link can be made.

Transmission documents

In Australia, when radio stations are granted a licence the regulatory authorities issue a TOC document which provides technical operating conditions from a nominated transmission site. If the nominated transmission site is different from where the station is to be operated a change in TOC has to be requested. This requires: an engineering assessment to be made of the implications of a change of transmission site; a coverage assessment; an interference assessment to other services; and the design and estimated radiated power to be used.

The TOC also provides the frequency of operation, the antenna radiation pattern and the amount of radiated power in any direction over 360 degrees. Any special limitations are also noted.

ANTENNAS

Antenna systems can be designed to achieve the desired radiation pattern. Antenna radiation patterns can be omnidirectional (360 degrees) or directional, where more power can be sent on one direction than another.

FM antenna

In general terms, FM transmission systems worldwide use two predominant types of transmitting antenna polarisations: vertical polarisation and mixed polarisation. Mixed polarisation is also sometimes known as circular polarisation.

Vertical polarisation is where the antenna elements are vertical to the ground. An example is a telescopic car antenna mounted on the fender of the car. Mixed polarisation antennas are not available for receiving systems, but in simple terms they transmit a vertical component, as with a vertically polarised antenna, as well as a horizontally polarised component (the horizontal component being as if the car radio antenna had been laid flat or parallel to the ground).

Mixed polarised antennas were originally introduced in the United States to provide a way for those with outdoor horizontally polarised TV receiving antennas to receive good quality FM signals via their TV antennas. The mixed polarised transmitting antenna transmitted the vertically polarised component required for the car radio antenna. Note that if one tries to receive a signal on one polarisation while it is being transmitted on another, then the signal seen at the receiver is less strong than would otherwise be attainable if both antennas were configured for the same polarisation.

Directional antennas are often used to reduce interference to other services and provide coverage only to a designated area. There are many factors which influence the antenna system chosen—cost, tower space available and coverage required, to name but a few.

An antenna system can be designed to meet the coverage requirements while at the same time providing gain. Generally, the larger the aperture of the antenna the higher the gain. In a simple case, that of a vertically polarised dipole antenna, the gain would be 1 (0 dB). The power output is the radiated power. If we now add another dipole of the same type, the antenna gain is increased to 2 (3 dB). A further 3 dB gain can be added by using an additional two antennas—of course the antennas need to be spaced correctly and stacked vertically.

With mixed polarised antennas, a single antenna has a gain of –3 dB. A mixed polarised antenna for this example can be considered as a horizontal antenna and a vertical antenna. As the input power is split equally between the two antennas and the antenna gain is always specified with respect to a dipole of either vertical or horizontal polarisation, a gain of –3 dB is arrived at. Again, stacking mixed polarised antennas results in gain increases. Two antennas give 0 dB gain, four antennas give 3 dB gain.

There are also other effects—namely, stacking antennas to get more gain can narrow up the transmission beam from the antenna and cause reception issues with listeners close to the antenna tower (due to low signal levels because of the antenna nulls in the vertical pattern).

AM antennas

In all cases, for broadcasting applications the polarisation of transmission is vertical, this being evident by the frequent use of high guyed steel towers. Usually the lower the frequency the higher the tower. AM antennas are designed to provide the maximum signal along the ground, called the ground wave. Ground-wave coverage also depends on the conductivity of the soil, and hence the transmitter is often located in an area where there is a high soil-moisture content to ensure efficient transmission. The antenna height, being related to the operating frequency, determines the ground-wave transmission efficiency. The electrical antenna height required for the best ground-wave coverage is ⅝ of a wavelength. At this height the signal being transmitted to the sky is at a minimum.

Signals transmitted to the sky are reflected from the ionosphere and often travel huge distances, especially at night. During the day the signals are largely absorbed by the ionosphere and hence do not cause interference beyond the designated coverage area. A large number of antennas used for AM transmission are ¼ wavelength in height and as such do have a larger sky-wave transmission component.

The degree of sky-wave component is important in establishing the effects of interference (especially during the night) on other AM services using the same frequency or on the adjacent channels.

A good AM antenna must be installed with an efficient ground plane. The ground plane assists with the signal launch from the antenna, ensuring the feed impedance of the antenna stays constant. To match an antenna to the transmission line for the transmitter an antenna coupling unit (ACU, also known as an antenna tuning unit or ATU) is required. Such a unit is placed at the base of the antenna.

Spark gaps, drain chokes and DC blocking capacitors should be part of the design of the ACU to assist with lightning protection and tuning. The design of the ACU is a complex matter, and sometimes very high RF voltages and currents are involved.

Radiation

With any antenna system, radiation is a natural part of its design. Under the *Health and Safety Act* and the Spectrum Management Authority regulations, broadcasters must account for the radiation levels near to the antenna to ensure the safety of the public and workers.

The levels of radiation under normal operating conditions are measured and the results presented in such a way as to indicate where levels exceed current standards. The results are presented in a site radiation folder, which should be read by any visitor and signed off as being read. If it is necessary to work or visit an area where the radiation level exceeds the designated safe levels, the station operator should be consulted with a view to having the station's transmitter turned off or reduced in power so that the radiation is within safe limits.

FM TRANSMITTERS

FM (VHF) transmitters range in power output from a few watts to 60 000 watts (60 kW) or more. Transmitters from a few watts to 20 000 watts can be sourced in a fully solid-state format. They are usually air cooled, requiring high volumes of air to ensure adequate cooling. In this respect the design of the air-cooling system is a vital component in the reliable operation of a transmitter. All but a few solid-state transmitter designs on the market today are of a wide-band design and operate without tuning between 87.7 MHz and 108 MHz.

Solid-state transmitters, once the RF power output level exceeds approximately 300 watts, are made up of many 300-watt amplifiers operating in parallel (four 300-watt amplifiers operating in parallel for 1200 watts total output would usually be rated at 1000 watts output).

One can then parallel another 1000-watt amplifier to provide 2000 watts output. The paralleling arrangement can then be carried on till the output power desired is reached.

Transmitter room

The paralleling methods used ensure that one amplifier is isolated from the other. This is done so that if one amplifier fails it does not affect the performance of the remaining operational amplifiers. All that happens is that the total RF output power reduces. In the case of two amplifiers operating in parallel, if one fails the total output power reduces to a quarter of that which would be provided if both amplifiers were operational. In the case of four amplifiers in parallel, if one amplifier fails the output power reduces to approximately two thirds of the total output, and if two amplifiers fail the output power reduces to a quarter of the total.

FM transmitters can also be supplied using a mixture of solid-state driver amplifiers and a final vacuum tube amplifier. The tube transmitters are available with power outputs ranging from 800 watts to 60 000 watts. The tube stage of these transmitters require tuning as they operate over limited bandwidths. Periodical tuning is also required as the tube becomes older to maintain the output power and operating efficiencies. Tuning complexities of the transmitters vary with the type of tubes and circuit configuration. Grounded grid configurations are inherently stable and are the simplest to tune. While the amplifier has less gain than the tetrode-type amplifiers, they are self-protecting in that if the driver power fails the amplifier naturally falls to a safe operating condition.

Tetrode amplifiers have high gain and as a result less driver power is required, but the tuning process of the amplifier is more complicated. As part of the tuning process the tube must be neutralised to avoid unwanted oscillations and parasitic oscillations which can cause interference to other services and inefficient operation of the amplifier stage. These amplifiers depend on protection circuits to operate to protect the tube from damage should the RF drive power fail, the grids bias fail or the screen voltage fail.

In all cases the FM transmitter has an exciter stage. This stage sets the operating frequency and modulates the input signal on to the operating frequency. This is done so that the frequency of the exciter varies in accordance with the loudness, or signal level, of the modulating signal.

AM TRANSMITTERS

Current AM transmitters are generally fully solid state, from a few watts to even 100 000 watts (100 kW) or more usually transmitting in the

MF range of frequencies. This is achieved by using FET semiconductor technology in very highly efficient, switch mode type amplifiers. As a result of the very high efficiencies obtained, the heat generated is small and cooling is easy. In addition, because of the low heat load the transmitters can be quite physically small as the components can be packed into a smaller space.

There are many techniques used to put a solid-state transmitter into service, but the basic operation is to apply the modulating audio signal to a pulse-width modulator. The modulator's output is passed via a filter to change the supply voltage applied to an RF power amplifier. The RF power amplifier switching that operating frequency then has its output vary up and down in accordance with the modulating signal, generating the AM amplitude modulated signal. Many such modulators and RF power amplifiers can be operated in parallel to provide higher output power levels.

Vacuum tube AM transmitters are still used and, while they can use a switching tube type modulator, they can also have a very high power linear audio amplifier to generate the necessary change in the voltage applied to the output RF power amplifier. In this case, if a 2 kW AM transmitter was being used, the internal audio modulating amplifier has to supply 1 kW of audio power to fully modulate the RF amplifier for broadcast. Additional audio power is required if the transmitter is to be modulated to 130 per cent on the positive peaks of the modulating signal. Beware that more than 90 per cent modulation may cause distortion in some receivers.

SETTING UP THE TRANSMISSION SYSTEM

The setting of the transmission system involves testing each component then setting the RF output power from the transmitter so that the effective radiation power limits, as set out in the TOC, are complied with. Then field checks and setting of the modulation levels are carried out.

The RF power level from the transmitter is set in an FM transmission system so that the ERP is equal to the transmitter power, less the feed cable losses and any additional losses such as an output bandpass filter or combiner plus the antenna gain. Once this power has been set, field measurements could be done through the coverage area and at locations where it is predicted interference may be an issue, to check the performance and to see if the predicted results match the practical results. These field checks are usually carried out once the modulation levels have been set so that listening-quality checks can be made at the same time.

In the case of the AM transmitter, the TOC is given in CMF volts. This can be referenced to a measured field strength at 1 km, and hence the transmitter power set against that figure. It is common, however, for the engineers to calculate a transmitter power to meet the CMF requirements and to set the transmitter power to that figure. Field measurements at 1 km are still done to verify the compliance within measurement error.

The setting of the modulation levels is important as it gives the station loudness while avoiding overmodulation. In the case of an FM station the maximum modulation is specified as plus or minus 75 kHz, and for an AM station 100 per cent modulation with a maximum of 135 per cent positive peak modulation allowable.

To set up the modulation for a stereo FM transmitter the overall modulation must be kept within plus or minus 75 kHz. There are signals other than the standard stereo signal that can be modulated on an FM station's signal. These include services such as radio data services (RDS) or supplementary carrier authority (SCA).

To set up the stereo signal modulation it is first necessary to set the stereo pilot level. This is done by setting the stereo coder to its stereo mode with the 19 kHz pilot on and no audio signals applied. The pilot level from the stereo coder is then adjusted so that the modulation meters indicate a plus or minus 7.5 kHz deviation (or 10 per cent, with 100 per cent being plus or minus 75 kHz). If the stereo coder is at the studio with an STL transmitter, then the STL transmitter's deviation is set to plus or minus 7.5 kHz. The modulation level from the STL receiver then should represent the plus or minus 7.5 kHz level. With this signal applied to the FM transmitter, its modulation level is set such that it deviates the transmitter plus or minus 7.5 kHz.

If the stereo coder has been set correctly by the factory there should be no reason to adjust any of the stereo coder settings. Apply 400 Hz signals of equal amplitude and with the same phase relationship to the input of the stereo coder. Adjust the level of the 400 Hz signal such that both the left and right channels indicate to a reference level which represents maximum modulation on the stereo coder. This then should show on the modulation indicators at the STL transmitter, STL receiver and the FM transmitter as plus or minus 75 kHz deviation.

If the audio processor has a pre-emphasis characteristic, this should now be switched into circuit and the stereo coder checked to ensure that the pre-emphasis is switched off. Because there are many different processors, there are a number of ways the audio levels can be set between the processor output and the stereo coder. For those processors that have an internal oscillator set-up tone, this should be used to set the audio levels between the processor output and the stereo coder input. It is important that if any adjustments are made both the left and right levels remain equal.

The audio input levels then need to be set in accordance with the studio set-up.

For AM transmitters a 400 Hz signal is applied to the transmitter from the processor. The transmitter audio input is then adjusted to modulate the transmitter to 100 per cent modulation, as indicated on a modulation meter or another instrument that indicates modulation level. The processor's controls can then be adjusted to provide the 135 per cent positive peak modulation while avoiding modulation greater than 100 per cent negative.

For both transmission types, standard audio levels should be used so that items of equipment can be bypassed in emergency situations, thus avoiding the need to make any adjustments. Common levels used are +12 dBm or +16 dBm for plus or minus 75 kHz deviation or 100 per cent modulation in AM. Some stations also use 0 dBm, +4 dBm or +8 dBm. Care is needed to set these levels as the indicated levels on VU meters and peak level meters are not necessarily the same. 0 VU may represent a signal of +8 dBm on a 400 Hz signal, although when a complex signal such as music is applied and the meter is set to 0 VU, the peak-to-peak output voltage represents +16 dBm. Therefore to set the correct signal level for setting the modulation level, a 400 Hz signal is applied and set to 0 VU first and then the input signal level is increased by 8 dB. This level then represents 100 per cent modulation or 75 kHz deviation. If a peak program meter is used then the 0 on the meter would represent the +16 dBm as we set up the VU meter.

Lastly, set the audio processor to provide the 'sound' that is desired, provided the processor has the control available to do so. The 'sound' can be very much what one person likes while another does not, and as a result considerable trial and error may be required to achieve a sound the station management is happy with. Some processors allow the processing characteristic to be switched in real time to suit the voice or music type being transmitted at the time. Other processors are a set-and-forget type and need less ongoing maintenance.

Earthing and protection

Earthing of a transmission system is a vital factor in its operation, not only from an everyday operational and performance requirement but also in the efforts to protect the equipment from lightning and surge damage. Because earthing is a complex matter and is to some extent location-by-location dependent, the detail will not be discussed here. In the design of an earthing system it is essential to ensure, as far as practical, that there is no voltage potential difference across any item of equipment, the technique being to consider a lightning strike as a point source and then over time consider that point source as a voltage step from 0 to infinity, moving away from the point.

The AC power source should be protected by surge-protection devices as close to the mains power input location as possible, but to be effective it must have a low inductive and very low DC resistance to earth. Most surge protectors have metal oxide varistors (MOV) devices as part of the protection. These deteriorate each time they conduct and eventually need to be replaced. Some surge-protection devices have indicators to show the state of the MOVs.

DIGITAL RADIO TRANSMISSION

The DAB+ system used in Australia is designed for robust transmission to mobile, portable and fixed receivers, using simple non-directional antennas, and is an upgrade on the original Eureka 147 DAB system introduced over a decade ago in the UK and Europe. The DAB+ system comprises three main elements, which are:

1. audio coding;
2. transmission coding and multiplexing; and
3. modulation.

DAB+ uses AAC+ audio coding technology (also known as MPEG-4) which achieves very high efficiency use of low bitrate data channels to encode high bandwidth audio. It employs the technique of psycho-acoustic coding using HE-AAC at a 48 kHz sample rate, which encodes only audio signal components that the ear will hear and discards any audio information that, according to the psychoacoustical model, the ear will not perceive. Bit-rate capacity is allocated only to the coded components of the signal.

After coding the process of multiplexing then takes place, combining the audio, data or multimedia content into a single data stream ready for transmission. The multiplex stream is often abbreviated as MUX.

DAB and DAB+ multiplexes comprise three distinct elements:

1. the *synchronisation channel*, which conveys reference frequency and timing information to allow receivers to synchronise to and decode the received DAB signals;

2. the *fast information channel* (FIC), which carries information describing the composition of the multiplex and informs receivers how to extract and decode the information for individual services; and
3. the *main service channel* (MSC), which contains the audio frames or data packets corresponding to the different services within the multiplex. This part of the multiplex is essentially the useful payload of the DAB signal.

DAB and DAB+ use a multicarrier digital modulation scheme called coded orthogonal frequency division multiplexing (COFDM), which uses many carriers (up to 1536) spaced at a 1 kHz separation, with each carrier independently modulated using differential quadrature phase shift keying. The multiplex data is distributed amongst all the carriers, occupying approximately 1.54 MHz of spectrum to provide maximum efficiency and robustness and minimise multipath distortion. Reed-Solomon error correction is used with DAB+ to further protect the bit stream's robustness.

This type of multiplexing allows for the provision of a single frequency network (SFN) of transmitters, ensuring efficient use of the spectrum. Transmission of digital radio in Australia is in Band III, with supplementary transmitters using L-band frequencies.

Digital radio mondiale (DRM) may also be used in regional Australia. DRM uses existing AM and FM frequencies and equipment, attaching digital coding and transmission technology to one side of the standard transmission carrier wave to allow simulcasting of both analog and digital signals. DRM, DAB and DAB+ are compatible systems, so tests are currently in progress to determine whether DRM will be a more cost effective way of covering Australia's vast land mass.

COMMON FAULTS

There are many types of faults that occur which will impede the transmission. The obvious one is an electronic part failure, which is not covered here because it requires specialist expertise, but there are others which cause partial failures. One of the more common problems is high reflected power indicated on the transmitter. Ideally this should be zero, but in practice there is always some small amount of reflected power measured. If the reflected power indication has increased since the station was commissioned then the possible causes are:

- *Water in the feed coaxial cable.* Replace the cable. If the cable that has water in it is part of the actual antenna system, it must be replaced with the same cable type measured to the same length or it will alter the antenna radiation characteristics.

- *Faulty connector termination or water in the connector*. Turn the power off, dismantle, clean, and if necessary replace the connector. Always check for water in ingress into the cable. Reseal the connector and either side of the connector with a weather-proofing material such as self-amalgamating rubberised tape. Place a layer of black UV-resistant PVC tape over the rubber tape to provide additional protection.
- *Failure of a component in the antenna system*. It may be necessary to check each antenna separately. These checks would need to be carried out at the operating frequency as many antennas are DC grounded and a simple ohm-meter check would show a short circuit.
- *Mechanical strain*. Over time the weight of the coaxial cable, mainly referring to the main feed cable going up the tower to the antenna, may be enough to cause the top of the cable to creep or sag, especially where the mechanical fixing of the cable to the tower supports is not as robust as it could be. This will place strain on cable bends and connectors. Under these conditions it is possible that the cable could be damaged internally causing it to short or the connector to pull apart. Repairs would be needed both mechanically and electrically.
- *Mis-tuned filter (if used)*. Faults can develop in high-power output filters and combiners. However, they are rare as they are passive devices. These devices require specialised test equipment and therefore the manufacturer or supplier should be consulted.

For a solid-state transmitter, faults are usually identified by a visual indicator showing the area of the problem. Common faults are:

- *Reduced power output*. In a solid-state transmitter this may be the failure of an RF power module. A simple case is where two amplifiers operating in parallel provide X watts output power. If an amplifier fails, the output power reduces to $X/4$. The more amplifiers that operate in parallel the less the power reduction if a single amplifier fails.
- *Gradual output power reduction (tube transmitters)*. Over time, vacuum tubes suffer from reduced emission and a subsequent reduction in output power. Retuning and some adjusts can be made to restore the output power. The operator may notice increases in grid current, increased driver power requirements and other changes. These get to a point where the tube has to

be replaced. A station should always keep a tube in stock because if the operating one fails the station could be off the air till a replacement is obtained.

- *Over temperature*. This can be attributed to many factors, but dirty air filters and/or a faulty fan are likely causes. Air intakes and exhausts need to be checked to ensure that restrictions to the free airflow have not been placed in such a manner as to reduce the flow.
- *Environment*. The environment where the transmitter is operating can have implications on its reliability. Over time, substances like moisture, airconditioning chemicals, water purification chemicals, vapours from restaurants and so on can cause corrosion on printed circuit boards, metal surfaces and silver plating, as well as causing contact problems and variable controls to cease. Precautions need to be taken against these issues while at the same time providing an operating environment conducive to the long term reliability of the equipment.

As with most problems associated with transmitters there is often a cause and effect. The transmitter failure may be the effect, but the cause may not be the transmitter itself. Other problems associated with transmission failure are many and varied, such as the loss of an STL transmitter or receiver or any of the communications circuit types between the studio and transmitter. Perhaps a new service has started up and is blocking or causing interference to your STL receiver? Or perhaps it's caused by equipment failure or, dare it be suggested, finger trouble.

USEFUL WEBSITES

<www.acma.gov.au/WEB/STANDARD/pc=PC_300102>
<www.arfc.com.au>
<www.digitalradioplus.com.au>
<www.elan.com.au>
<www.innescorp.com.au>

GLOSSARY

AAC (ADVANCED AUDIO CODING) See AAC+.

AAC+ (ADVANCED AUDIO CODING PLUS) A digital encoding system used in digital radio. The DAB+ system used high efficiency advanced audio encoding to achieve better sound over low bit rate data channels.

AC Alternating current; electricity from the mains supply.

ACCOUNT Advertising sponsor (see CLIENT).

ACMA (Australian Communications and Media Authority) Australia's regulatory body for broadcasting, internet and telecommunications.

ACOUSTIC SCREEN Movable screen for creating special acoustics or preventing unwanted sound.

ACOUSTICS The science or study of sound. Often used in relation to the sound properties of a studio or recording place, that is, the amount of echo or reverberation heard. We talk about 'good acoustics', 'live' or 'dead' acoustics, and so on.

ACTUALITY Sounds recorded 'live' at the place of a real event or situation.

AD LIB To improvise, talk freely without reading a written script.

AERIAL/ANTENNA Conductive device which transmits or receives broadcast signals.

AGC (automatic gain control) An electronic device often found on portable tape recorders and in radio control-room racks. In the case of radio stations, AGC devices are often referred to as 'limiters'. AGC automatically holds back excessive signal level. In radio stations, limiters are preset to a desired level and act as shock absorbers for sloppy panelling techniques.

AGENCY COMMISSION Fee charged by, or allowed to, an advertising agency for placement of advertising on air.

AGENT Representative for the booking and charging of fees for talent.

AM (amplitude modulation) The sound signal to a transmitter associated with medium-wave broadcasting.

AMBIENCE The surrounding atmosphere of a place; the background sound or mood of a place or an environment.

AMP/AMPLIFIER Piece of equipment used to make sound louder or electrical currents stronger.

ANALOG EDITING Editing using older type analog machines such as reel-to-reel and cassette machines which record using magnetically charged particles on tape.

ANNOUNCER Broadcast communicator/presenter.

ATMOS Sounds recorded at the place of an event to identify the location (i.e. traffic noises, bush noises, crowds).

AUDIO Sound.

AUDIOTAPE Plastic tape in various widths for recording or re-recording sound.

AUDITION To listen to a person or to a recording to ascertain ability. An audition tape generally refers to a tape recorded by an announcer to show their ability to a prospective employer.

BACK-ANNOUNCE To give details of a song or program immediately after it has been broadcast.

BACKGROUND Music or sound effects behind voice or action to create a certain mood or actuality situation. Background noise is another type of background, which can be a distraction behind an interview, vox pop or outside broadcast.

BACK-TRACK The movement of a stylus in a damaged groove of a vinyl record. When it keeps jumping and repeating the same musical passage it's said to be 'back-tracking'. Also often called 'jumping'.

BED Refers to the background music or instrumental jingle used behind the voice in a commercial.

BOARD An American term for the studio control desk/panel.

BOOM Wheeled microphone support, with a long arm.

BOOTH Small soundproof studio used for separate voice recording.

BRIDGE Music or sound effects used to link one item to another.

CABLE The shielded wire used to connect together various pieces of equipment. Also often called a 'lead'.

CANS Industry term for headphones or earphones.

CARDIOID MICROPHONE Microphone which picks up sound in a heart-shaped pattern. This type of microphone is frequently used in broadcast studios.

CASSETTE Tape on twin spools enclosed in a plastic case, used mostly in domestic or portable recording machines.

CD (compact disc) A digitally encoded high-quality recorded plastic disc containing music and/or data, produced using laser technology.

CHANNEL A sound or signal path. In stereo there are two channels in the system.

CITIZEN JOURNALISM Contributions to news stories from people who are not professional reporters or journalists, usually using new technology such as recorders and mobile phones to contribute location reports and actuality sound and vision.

CLIENT Agency or advertiser buying broadcast time.

CODEC A device which applies digital encoding and/or decoding to an audio file.

COFDM (coded orthogonal frequency division multiplexing) An element in the digital radio transmission chain.

COMMENTATOR An announcer/presenter who deals with any specialised area, subject or event (e.g. sports commentator, current affairs commentator).

COMMERCIAL An advertisement for broadcast.

COMPRESSION This term has two meanings in a radio context: (1) the act of compressing volume as described above and (2) a process that reduces the size of digital audio files by taking out some frequencies or samples. Depending on the rate of file compression chosen, this process may be imperceptible to the listener or, if too much compression is applied, the listener may hear lower quality sound.

COMPRESSOR An electronic device, usually found in the equipment rack, which compresses the volume of signal leaving the studio en route to the transmitter, packing it into a narrower audio bandwidth. If set too high, these adjustable devices can produce a 'sucking' sound during moments of dead air, but set properly they can enhance the sound of the station.

CONSOLE The unit of equipment mounted on the announcer's desk that enables the input and mixing of various program sources such as tapes, records, CDs and voice.

CONTENT AGGREGATORS Software such as iTunes which collects audio and video content from many sources and presents it to the user through one common interface.

CONTINUITY Announcements linking a series of prerecorded programs or segments.

CONTROL ROOM Production room, usually separated from the studio by a soundproof window and door.

CONVERGENCE Term used to refer to the integration of different transmission systems. Television, radio and the internet are said to be converging because it is now possible to see pictures via digital radio or on a radio station's website and to hear radio programming via the internet or on interactive TV.

COPY Refers to a script, generally for a commercial radio advertisement, community service, promotional announcement or news item.

CROSS-FADE See FADE.

CUE (i) The sign given to a person to start speaking on air or to start a program. It may be a hand signal, a light, or simply a notation on a script.

(ii) To cue refers to setting up a tape, vinyl record or other audio source so that it is ready to start immediately when needed.

CUE SHEET Written details about a program showing the structure and timing of the various elements of the program, including how it ends.

CUT The different tracks of material recorded on a tape or audio editor are referred to as cuts. They are also sometimes referred to as tracks or grabs.

CUT EDIT See EDITING.

DAB See DIGITAL RADIO.

DAB+ See DIGITAL RADIO.

DAT Abbreviation for digital audio tape, a system of recording using digital storage of sound on a plastic tape similar in size to a cassette.

dB The abbreviation for 'decibel', the unit for measuring the loudness of sound.

DC Direct current: the type of electrical current produced by batteries.

DEAD AIR Silence during a radio program (usually when there's some fault).

DEAD MIC A microphone that's not in use or is not switched on.

DEAD SIDE (of a microphone) The part of certain types of microphones that doesn't respond to sound.

DEAD STUDIO A studio that's 'dead' acoustically is one where there is no echo or reverberated sound.

DEAD TRACKING When the stylus reaches the end of a vinyl record and is allowed to keep running in the unrecorded grooves.

DE-ESSER A compressor designed to eliminate sibilance by compressing the frequency bands in which sibilance occurs.

DEFAMATION The publication of material about an identified person that ruins their reputation.

DELAY A device which introduces a time delay between input and output. May also be referred to as program delay.

DIGITAL DELAY A signal processing device which digitally generates various effects, including reverberation, echo, flanging and chorus, as well as other doubling and pitch-shifting effects.

DIGITAL EDITING Editing using digital sound manipulation computer programs. Some popular digital editing programs include Protools, Adobe Audition and Audacity.

DIGITAL RADIO Radio program transmission in digital format. Digital radio uses frequencies in a different transmission band from AM and FM. There are different types of digital radio transmission systems: DAB (digital audio broadcasting) and DAB+ using the Eureka 147 system, the American IBOC (in-band on-channel) system and DRM (Digital Radio Mondiale), a European in-band system.

DIGITAL RADIO MONDIALE (DRM) A system of digital radio, similar to IBOC, which can transmit digital signals on the same band as AM and FM signals.

DIN Plug or socket manufactured to standard Deutsche lndustrie Norm.

DISTORTION Change in the quality and clarity of sound, often caused by over-modulation (too much volume for the equipment being used).

DLS (dynamic labelling segment) The text display on a digital radio.

DOCUMENTARY A feature program dealing with a factual subject or theme.

DOLBY SYSTEM Trade name for equipment designed to reduce the background-noise level of tape generated by the recording process.

DROP-OUT Loss of sound in a recording caused by parts of the magnetic coating of the tape coming off, a bad edit or digital over-modulation.

DUB To transfer the sound of a recording from one record or tape to another. 'Dubbing' also means to make a copy of a tape or recording.

DUB EDIT See EDITING.

DUMMY PROGRAM A program not designed for actual broadcast. Generally used for research purposes to check listener reaction to a station's programming.

DYNAMIC RANGE The difference between the softest and loudest sounds which can be recorded without distortion.

ECHO Repetition of sound, produced by reflection from a hard surface, or produced electronically through a reverb unit.

EDITING Reordering or correcting a recorded program by cutting and splicing the tape or by selective dubbing of the material onto another tape.

EFFECTS Actuality sounds added to a program or a commercial to make it sound more real to the listener. Referred to in a script as 'FX', 'SFX' or 'EFF'.

ENCODING Part of the audio compression process that takes place within digital equipment. In digital radio transmission encoding is one step in the process of converting signals before transmitting them.

ENGINEER Station or studio technical staff.

EPG Electronic program guide.

EQUALISER (EQ) A signal processing device which can boost, attenuate or filter the frequency balance of a sound source or sound system (see also GRAPHIC EQUALISER, PARAMETRIC EQUALISER).

ERASE To remove all recorded sound from a tape.

EXPANDER A signal processor which expands the dynamic range of a signal.

FADE To alter the volume of sound. We talk about fading down, fading up, fading under, fading out, fading in and cross-fading. To 'fade down' is to gradually reduce the volume of sound from a record or tape. To 'fade up' or 'fade in' is to gradually increase the sound level or volume. To 'cross-fade' is to fade from one sound or record into another without interruption or announcement. To 'fade under' is to bring music or effects down behind a voice.

FADER A slide volume control on a mixing desk.

FEEDBACK The input of a signal from the output of the same system, causing a high-pitched squeal to develop. This usually happens when a loud speaker or set of headphones is facing an open microphone.

FEEDSPOOL Tape recorder spool supplying tape to the recording head (as opposed to take-up spool).

FILTER Electrical device for removing unwanted frequencies from a sound source, such as mains hum or surface noise from a recording (see HIGH-PASS FILTER, LOW-PASS FILTER).

FM (frequency modulation) Broadcasting mode in the VHF broadcasting bands which provides a high-quality analog signal.

FREQUENCY RESPONSE A relationship between amplitude (loudness) and frequency, represented graphically. Used to measure a system's ability to reproduce a range of frequencies with the same relative loudness.

FX Abbreviation for 'sound effects'.

GAIN Generally used to mean 'volume' (of sound). Gain control means the knob or fader used for controlling the volume of sound.

GENERATION (of tape) The original recording is the first generation. The dub of that is the second generation, and so on. In analog recording, each generation is a lesser quality than the previous one. In digital recording there is no quality loss in successive generations.

GPI (general purpose interface) A remote control trigger switch on a digital desk.

GRAB A recorded voice piece from a reporter or interviewee/talent, usually in a news situation. Can also apply to similar voice pieces from studio interviews.

GRAPHIC EQUALISER An equaliser with sliding controls which gives selective equalisation in narrow bandwidths. Named 'graphic' because the position of the knobs gives a graphic representation of the frequency response curve selected.

HARMONIZER A signal processing device which generates various effects including delay, doubling and pitch shifting. 'Harmonizer' is a brand name of the company Eventide Harmonics, rather than a description of an effect.

HEAD Part of a tape recorder. The 'record head' records the magnetic sound impressions onto tape. The 'playback head' deciphers the sound impressions, enabling them to be heard. The 'erase head' wipes the recorded sound off the tape.

HEADPHONES Small speakers worn over each ear, usually on a headband.

HEADSET Headband-mounted earpiece and mouthpiece sometimes used by sport commentators.

HERTZ (Hz) One cycle (frequency) per second. Audio frequency is measured in Hz (e.g. 15 000 Hz). One thousand Hz is referred to as one kilohertz (e.g. 1 kHz).

HIGH FREQUENCY Sound frequency from 15 000 Hz to far beyond normal hearing ability.

HIGH-PASS FILTER A filter which attenuates frequencies below a selected frequency and allows those above that point to pass unaffected. Used to reduce or eliminate unwanted low-frequency noise such as traffic rumble and airconditioning.

HISS Also known as 'white noise', hiss is the background noise usually heard on analog tape, especially cassettes, when replaying low-level recordings or during blank-tape passages in a recording.

IDENTIFICATION The call sign, logo or a jingle identifying the station. Also referred to as station identification, idents or IDs.

IN-FILL When referring to radio transmission, in-fill is a term that describes the process of placing low powered transmitters in low signal black spots so that listeners in these areas can hear the station. In digital radio, in-fill transmitters can all use the same frequency (see SINGLE FREQUENCY NETWORKS).

INPUT The entry socket for a microphone or other piece of equipment to allow its signal to be fed into a mixer, amplifier or other piece of equipment.

IPS (inches per second) Relates to audio tape recording speed, that is, the number of inches of tape that pass the record or playback head each second. There are also equivalent metric measurements. The most-used tape speeds in radio are 3¾ IPS (9.5 cm), 7½ IPS (19 cm), and 15 IPS (38 cm).

JACK The name given to the male plug (single or double pole) on the end of a 'patch cord' used to connect pieces of equipment. The unit into which a number of jacks and patch cords can be plugged is called a 'jackfield'.

KEY Switch.

KILOHERTZ (kHz) A thousand cycles per second.

KILOWATT (kw) A thousand watts of electrical power.

LEADERTAPE Plastic tape joined or spliced to the start of a reel of magnetic recording tape. Leader- or 'timing' tape may also be spliced into various parts of a reel-to-reel tape to show where certain segments of a program start and end. This type of tape is usually coloured green, red, white or yellow.

LEADS Lengths of cable or shielded wire (e.g. 'microphone leads', 'power leads').

LEADTIME Time available for the preparation of a program.

LEVEL The loudness or volume of sound.

LIMITER Device preventing the signal level from exceeding preset values. See AGC.

LIVE Broadcast as it happens, as contrasted with a prerecorded program. The term 'live' is also used to indicate that a microphone is switched on—a 'live microphone' or 'open microphone'.

LIVE LINERS Announcer's cue cards, usually about in-house promotions but sometimes for community services. Generally no more than two sentences long.

LOG Written or printed record of a station's daily broadcast schedule. Can also refer to a recording of the program, made on a 'logging' tape.

LOW-PASS FILTER A filter which attenuates frequencies above a selected frequency and allows those below that point to pass unaffected. Used to reduce or eliminate unwanted high-frequency noise such as hiss or surface noise from records.

MAGAZINE Type of program containing many segments, such as music, news, interviews and comment.

MASTER TAPE Tape containing the original recording, from which copies or 'dubs' may be made if required.

MEDIUM Means of communicating an advertising message.

MEGA Million units—as in megahertz (MHz), megawatt (Mw).

METADATA Additional data attached to a digital radio signal (or an internet stream or website) which carries additional information such as transmission characteristics, key words, pictures or text.

METER Two main types are the VU meter (see VU) and the peak program meter (see PPM). Meters show the level of the program using a moving needle or a series of LEDs (light emitting diodes).

MF Medium frequency transmission range.

MIC (or MIKE) Abbreviation for microphone.

MINIDISC A rerecordable digital-format sound storage device resembling a small CD in a plastic case.

MIXER A piece of equipment containing a number of amplifiers which enables the combining or mixing of sounds from various sources into a single output.

MODULATION The application of a radio station's program material to the carrier wave. Also the control of program levels or volume to an acceptable standard so that equipment works effectively.

MONITOR To listen to. We talk of monitoring a program, to hear how it sounds or to ascertain content. A 'monitor speaker' is the loudspeaker which enables an announcer to hear the program.

MOOD MUSIC Music specially recorded for use in the production of commercials or in radio drama to set a certain mood or convey a desired feeling or atmosphere.

MP3 A popular file format for storing sound in digital form. The quality is lower than WAV or MPEG formats because more compression is used in MP3 formats. Because of the greater compression, MP3 file format is useful for storing larger numbers of audio files and is quicker to transmit over the internet than WAV or MPEG sound file formats.

MPEG An audio file format for storing or transmitting sound. The name is derived from the Moving Picture Experts Group, which developed the encoding standards for this type of file. The original DAB digital radio transmission system used MPEG 1 encoding, while the later DAB+ system used MPEG 4 encoding, also known as AAC+.

MULTIPLATFORM (also referred to as cross-platform) Modern media are delivered on many platforms such as mobile phones, computers, radio receivers, and so on. This term describes the process of transmitting on more than one platform at the same time.

MULTIPLEX (mux) The part of a digital radio transmission system which combines multiple station signals into one transmission stream for broadcast.

MUSIC SWEEP A series of songs played together without significant interruptions, for example 'a 20-minute music sweep' is 20 minutes' worth of songs played back-to-back. Not to be confused with 'sweepers', which are short station promotional segments.

NARRATOR The person who tells part of the story or verbally links various elements in a radio drama, feature or documentary.

NETWORK A group of stations that band together for a particular purpose (sales or programming). They may or may not be owned by the same people.

NOISE GATE An expander with a threshold which can be set to reduce or eliminate unwanted or low-level sounds, such as room ambience, rumble and microphone leakage, without affecting the wanted sounds.

NON-LINEAR EDITING Editing using a digital system where the audio grabs can be manipulated at any point of the editing process, rather than the older 'analog' method where recordings are on a tape which must be fast-forwarded and rewound to access the appropriate sections for editing.

NULL An area within the transmission coverage pattern where the signal cancels out almost entirely. When properly planned, a null is useful for protecting other nearby transmitters from interference.

OB (outside broadcast) A program which originates at a place away from the studios.

OFF MIC Sounds that are not travelling directly to the microphone. If an announcer turns while speaking into a microphone, the voice will be 'off mic'. Similarly, 'on mic' means talking directly into the microphone in the correct manner.

OMNIDIRECTIONAL MICROPHONE A type of microphone sensitive to sounds from all directions.

ON AIR 'On air' simply means 'broadcasting'. If an announcer is said to be on air, they are broadcasting a program.

OPEN ENDED A recorded program, jingle, interview, commercial, and so on which needs something added to it to be complete. This may be an introduction, ending or 'tag', or voice-over, or the questions in an interview may need to be added by an announcer.

OVERLOAD A level that's too high can 'overload' a recording or the transmitter. This can cause distortion or breaking up of the recorded sound and can even result in transmitter failure.

PA Public address system.

PANEL The console or consolette which the announcer operates in order to present a radio program.

PAN POT (panoramic potentiometer) A control on a studio desk which allows the placement of a source to the left or to the right in a stereo image.

PARAMETRIC EQUALISER An equaliser in which the bandwidth of a selected frequency is continuously variable.

PATCH CORD A length of shielded wire with plugs or 'jacks' on each end for connecting to equipment.

PHASING A musical effect caused by mixing a sound with a delayed version of the same sound and then slowly varying the delay. Phasing also refers to interference caused when two microphones placed close together produce a hollow, pipe-like sound.

PICK-UP The head and stylus unit used to pick up sound from a vinyl record.

PICK-UP PATTERN The area around a microphone where sound is received clearly. There are different microphone reception patterns including ‘cardioid’, ‘omnidirectional’ and ‘figure 8’.

PLATFORM AGNOSTIC Content prepared for broadcast can be transmitted on one or many platforms because it has been made in a way that will transmit successfully on radio, internet, mobile and other transmission platforms.

POINTER An announcement broadcast before a certain program or event in order to publicise it.

POPGUARD A device to prevent ‘popping’ sounds in a mic. Can be a disc covered in fine nylon gauze suspended a few centimetres in front of a broadcast mic, or a foam sphere placed over the front end of the microphone (see also WINDSOCK).

POPPING The popping sound on plosive consonants (particularly p, s, t and d) created by someone who’s working too close to a microphone. A strong wind blowing into a microphone in an outdoor situation can also cause popping. This phenomenon is also sometimes called ‘blasting’.

PPM (peak program meter) A volume-measuring meter which indicates the amount of level being generated (see also VU). A PPM uses green and red LED lights to indicate level rather than a needle. While a VU meter indicates the average level of sound, a PPM indicates the actual level and is more accurate in measuring peaks.

PRERECORD To record program material before it’s scheduled for broadcast.

PRODUCER A broadcaster who prepares programs for broadcast or who assists a broadcaster on a special program, such as a current affairs or talkback show.

PROGRAM-DELAY SYSTEM A device which introduces a time delay between the broadcast studio and the transmitter. Used in talkback radio to allow broadcasters to prevent the broadcast of offensive or defamatory material.

PROXIMITY EFFECT A change in audio characteristics as you move closer or further away from a cardioid microphone.

PSYCHOACOUSTIC MASKING The effect on human perception of sound when one louder sound masks, or drowns out, another sound.

RADIO 2.0 A term used to refer to multiplatform transmission methods.

RADIO MIC Microphone requiring no direct cable connection, useful for stage work, outside broadcasts, and so on. Sound from a transmitter inside the microphone is sent to a receiver, which is plugged into the mixer, recorder or PA.

REGION A section of sound marked for later placement in the multitrack view of a digital editing program.

REVERBERATION (REVERB) A series of reflections spaced so closely that they are not perceived as discreet echoes. Their cumulative effect creates the impression of room liveliness. This effect can be obtained by recording in live spaces (e.g. halls) or by using electronic reverberation devices.

RIGHTS/ROYALTIES Payment for creative or performance work by equity.

RPM (revolutions per minute) The number of revolutions or turns made by a vinyl record each minute.

RUNNING SHEET A sheet of paper showing all segments of a radio program, including the timing of the cues and various items, to enable smooth presentation.

RX Abbreviation for 'radio receiver'.

SCRIPT The written text of a radio play, feature program or commercials to be read by an announcer.

SCHEDULE The list of daily programs broadcast by a radio station. Also called a log.

SEGUE Pronounced 'seg-way'. The joining together of two pieces of music or sounds without announcement—similar to 'cross-fading'.

SERIAL A series of programs telling a continuous story broadcast on a regular basis.

SERIES A complete set of programs having a common theme or subject.

SIBILANCE A hissy distortion often produced by the high energy levels of sibilants in speech (s, z, sh, ch, zh).

SIGNAL-TO-NOISE RATIO The relationship between the desired signal level and inherent unwanted electronic noise (e.g. tape hiss). The higher the signal-to-noise ratio the cleaner the sound.

SINGLE FREQUENCY NETWORK (SFN) A transmission network where all transmitters use the same frequency without interference. Digital radio is most successful in using single frequency networks, while AM and FM transmissions often cause interference when broadcast on the same frequency in close proximity.

SOUND EFFECTS See EFFECTS.

SPLICE The join made between two pieces of magnetic recording tape.

SPOT ANNOUNCEMENT A short announcement (usually of 15, 30, 45 or 60 seconds' duration). Can refer to a commercial, a community service announcement, and so on.

STAND-BY Term used to warn a broadcaster that they will go on air in a moment or to tell them to wait a moment for more information. Also, a stand-by program is a prerecorded program kept on hand for use in an emergency (e.g. equipment failure, landline failure).

STEREO SYNTHESISER Artificially creating the impression of stereo by the use of filters and out-of-phase signals.

STL (studio-to-transmitter) LINKS Microwave links which carry the program from the studio to the transmitter site.

STOP-DOWN Term used to describe an announcing segment within a program.

SURFACE NOISE The noise heard from a worn or badly pressed vinyl record.

TAKE-UP REEL The spool on the right-hand side of a tape recorder where the tape is collected. The spool containing the tape waiting to be played is called the 'supply reel'.

TALENT A person being interviewed or appearing on a program or in a commercial.

TAPE Commonly used to refer to magnetic recording tape in reel-to-reel, cassette and cartridge formats.

THEATRE OF THE MIND A term used to explain the pictures, colour, movement and action that people imagine when listening to well-crafted radio productions.

TOC EDIT ('table of contents' edit mode) Found in digital recorders, such as minidiscs, to indicate when the index information for recorded sound is in the process of being stored.

TONE The steady sound often recorded onto the start of a tape, enabling levels to be set correctly for the program that follows on the tape.

TONE ARM The stylus and arm assembly on a studio turntable.

TRACK The various items recorded on a tape or record are called 'tracks' or 'cuts'.

TRACKING A term used in research to indicate a station's performance (e.g. during a ratings period). Also the movement of a stylus along the grooves of a record is called 'tracking'.

TRANSCRIPT The text of a broadcast as transmitted.

TRANSCRIPTION High quality tape recording of a program for use by other broadcasting services.

T/T Turntable.

TURNTABLE The actual 'deck' component of a studio record player.

TX The abbreviation for transmitter.

UHF (ultra high frequency) Radio or television transmission in the range from 300 MHz to 3000 MHz.

UNIDIRECTIONAL A microphone that records sound from a single direction only, usually from directly in front. Unidirectional mics are the opposite to omnidirectional ones, which have a far wider pick-up pattern.

USER-GENERATED CONTENT Similar to citizen journalism, user-generated content is created by non-media personnel and contributed to the station in electronic from. This term is wider than citizen journalism as it can encompass non-news content as well as more serious content.

VHF (very high frequency) 30 MHz to 300 MHz.

VOICE-OVER Words spoken by an announcer over the instrumental opening of a record, or over a music bed in a commercial, and so on. We also refer to announcers who 'voice' or record commercials regularly as 'voice-overs'.

VOICE REPORT Broadcast news piece in the reporter's own voice.

VOX POPS From the Latin *vox populi*, meaning 'voice of the people'. A series of comments, edited together, about the same topic.

VU (volume unit) A measurement of sound. The meters in a console which are used to measure the level of program being sent out are called 'VU meters'.

WAV A high-quality file format used for storing sound in digital form (see also MP3 and MPEG).

WHITE NOISE See HISS.

WIPE To erase the recording from a tape.

WINDSHIELD The cover for a microphone, used to reduce wind noise when recording outside and to reduce popping. Often covered by a foam popguard to give additional protection.

WINDSOCK A foam rubber cover to prevent the plosive 'p' sounds from 'popping' during broadcast (see also POPGUARD).

WOW The sound made when a vinyl record or tape is not cued properly and gradually gathers speed. We also say a tape or record is 'wowing' when it's running at an irregular speed and keeps slowing momentarily.

ZERO A function on a recorder which returns the player to the zero point of the counter. Also known as 'return to zero' (RTZ).

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NOTES

Preface

The section 'The people who make radio' is sourced from the 'On Radio' column by Steve Ahern, *Australian*, 27 May 1999 and is reproduced with permission.

Chapter 1

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